



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Peter B. Madoff et al. Art Unit : 3621
Serial No. : 09/272,542 Examiner : Hewitt, Calvin
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Title : AUCTION MARKET WITH PRICE IMPROVEMENT MECHANISM

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APPEAL BRIEF ON BEHALF OF PETER B. MADOFF ET AL.

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(1) Real Party In Interest

The real party in interest in the above application is Primex Holdings, L.L.C., a New York limited liability company.

(2) Related Appeals and Interferences

Appellant has listed in the Related Proceedings Appendix, a prior decision rendered by the Board in this case. The Appellant is not aware of any other appeals or interferences related to the above-identified patent application.

In this decision, the Board reversed a decision by the examiner finding Appellant's claims either anticipated by or obvious over Harrington et al, U.S. Patent 6,161,099 or obvious over Harrington et al, U.S. Patent 6,161,099 in view of Silverman et al. U.S. Patent 5,136,501.

(3) Status of Claims

This is an appeal from the decision of the Primary Examiner in an Office Action dated September 23, 2005, rejecting claims 1-40, 55-58 and 64-78, all of the claims of the above application. The claims have been twice rejected. Claims 1-40, 55-58 and 64-78 are the subject of this appeal.

Appellant has filed herewith a Notice of Appeal.

(4) Status of Amendments

All amendments have been entered.¹

¹ Prior to the instant rejection, in an effort to advance prosecution of this application, Appellant amended claims 14 and 35 to comply with suggestions made by the Board of Patent Appeals and Interferences in their decision on pages 18 and 9 respectively. For claim 33, the Board noted that claim 33, unlike claim 71, did not include responses being relatively priced. Appellant amended claim 35 to recite that at least some of the responses specify the price, as a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price for the product.

(v.) Summary of Claimed Subject Matter

Background

The claimed invention relates to an automated auction system for trading products such as equity securities.

There are known auction types. One type of auction process is a live auction for financial instruments such as futures contracts and for equities in an exchange. Examples of live auction include but are not limited to the New York Stock Exchange® (NYSE) or the American Stock Exchange® (AMEX). Other types of auctions are so called “call” or “periodic” auctions such as the Arizona Stock Exchange. In these types of “periodic” auctions, orders are matched only at specified times during the day. [Specification page 1, lines 3-25].

Appellant's Invention

Claim 1

One aspect of Appellant's invention is set out in claim 1, as a method of auctioning products. The method is executed over a distributed networked computer system. “The networked auction system 10 includes an order entry side 12 comprised of any/all of broker/dealer systems 12a, electronic communication network (ECN) systems 12b and public participant systems 12c that enable members of the public to participate in the networked auction system 10 either directly, via the Internet, or indirectly, via the Internet or another communication medium, through a sponsor such as a broker/dealer. Each of the systems 12 allows the various participants to enter orders into an automated auction system 20. The order entry portion 12 of the networked auction system 10 can also include day trader systems 12d, institutional systems 12e, exchange specialists 12f, and option market makers 12g.” [Specification page 5, lines 17-28].

Inventive features of claim 1 include entering an order for a product by specifying in the order at least conditions of a quantity of the product and an exposure time for which the order can be displayed for responses. “The information can include a security symbol, an indication of whether the order is to buy or sell, a quantity, an exposure period,” [Specification page 18, lines 14-16]

Inventive features of claim 1 also include entering responses to the order, at least some of the responses specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price for the product, and quantity for the product. "Responses in the auction system 20 can include fixed price, relative price" [Specification page 9, lines 27-28] "Aspects of the auction system rely upon relative prices. These prices are relative to a standard, variable market price. One standard pricing mechanism used in the auction system 10 when auctioning stocks is The National Best Bid/offer (NBBO). The NBBO is a standardized quote in the securities industry for the national market systems best consolidated quotation. The National Best Bid/Offer is a quantifiable price to buy and sell. The NBBO is always changing and could change during the life of an order having an impact on the final price. The relative pricing mechanism uses the NBBO and a price improvement "pi" to produce relative prices. The "pi" enables an order to achieve the best price in the market at the current time. The provision of the price improvement relative to the NBBO or other standard market quote would tend to improve the execution price relative to the spread, i.e., the difference between bid and offer prices for any product or security. It also facilitates decimal denominated trading by enabling small price improvements of one (1) cent or even less." [Specification page 2, line 24 to page 9, line 11]

Inventive features of claim 1 also include matching the order with a first one of the responses that meets all of the conditions specified by the order during the exposure time specified by the order, with matching of the first one of the responses with the order terminating the auction. "Whichever order response system 14 responds first to the order and meets or exceeds the terms of the order will result in a match for execution." [Specification page 6, lines 20-22] "At the instant of order entry, an order is exposed to the crowd for the exposure time specified in the order. However, an execution can always end the auction sooner, as will be described below." [Specification page 8, lines 24-25] "The auction ends, as soon as some response that meets the minimum qualifications of the order is received provided that the order is still actively exposed to the crowd." [Specification page 7, lines 24-25]

Claim 14

Another aspect of Appellant's invention is set out in claim 14, as a method of auctioning financial products over a distributed, networked computer system. This feature finds support as the analogous feature of claim 1.

Inventive features of claim 14 include entering orders for financial products into the distributed, networked computer system by specifying in the order a price for the financial product, a quantity of the financial product and exposure time which the order can remain active. This feature finds support as the analogous feature of claim 1.

Inventive features of claim 14 also include entering responses to orders for the product, said responses specifying a price and quantity; and for a first one of said orders. This feature finds support as the analogous feature of claim 1.

Inventive features of claim 14 also include matching said first order to the responses and contra-side orders, during an interval determined by the exposure time specified by said first order, with a first one of the responses or contra side orders that meets the conditions specified by the order terminating the auction. This feature, as it pertains to orders and responses, finds support as the analogous feature of claim 1. As to contra side orders, the feature is supported by: "The process 100 compares 106 the order to any existing pre-defined relative indications, contra-side orders or responses (if responses are chosen to have a lifetime as discussed below) that exist in the system 10 at order receipt." [Specification, page 19, lines 13-17]

Inventive features of claim 14 also include expiring the first one of the orders if no matching responses or contra-side orders are received during the exposure period. "Otherwise, the process 100 will continue to wait until the exposure time period 119 specified in the order 101 has elapsed 118. If the process 100 does not receive a matching response within that time period, as shown in FIG. 10B, the process 100 will expire 124 the auction process for that order." [Specification, page 24, lines 6-7].

Claim 24

Another aspect of Appellant's invention is set out in claim 24, as a computer program product for auctioning products. The computer program product resides on a computer readable medium and includes instructions for auctioning products. "The server system 21 executes a

server process 100 (FIGS. 10A-10C) that is stored on a storage medium 21b and which is executed in computer main memory 216 that is part of the server 21.” [Specification, page 6, line 31 to page 7, line 2].

Inventive features of claim 24 include instructions to receive an order that was entered for a product, the order having a specified price, a quantity and an exposure time. This feature finds support for an order for a product specifying quantity and exposure time at least as the analogous feature of claim 1. For the feature of price, the feature is supported by: “The order can specify a price.” [Specification, page 2, line 5].

Inventive features of claim 24 also include instructions to receive at least one response specifying a relative price with price improvement, and a quantity. This feature finds support at least as the analogous feature of claim 1.

Inventive features of claim 24 also include instructions to match the order with the at least one response during the exposure time specified by the order at the price of the response, with the relative portion of the price fluctuating according to changes in a national best bid/offer price that is periodically published during the auction. This feature finds support at least as the analogous feature of claim 1.

Claim 33

Another aspect of Appellant's invention is set out in claim 33, as a system for auctioning financial products over a distributed, networked computer system. This feature finds support at least as the analogous feature of claim 1.

Inventive features of claim 33 include a plurality of workstations for entering orders for financial products into the distributed, networked computer system by specifying in the order a quantity of the financial product and an exposure time for which the order is displayed for responses. This feature finds support at least as the analogous feature of claim 1.

Inventive features of claim 33 also include a plurality of workstations for entering responses to orders for the product, said responses specifying a price and quantity. This feature finds support at least as the analogous feature of claim 1.

Inventive features of claim 33 also include a server computer coupled to the workstations for entering the orders and the responses, said server computer executing a server process. This feature finds support at least as the analogous feature of claim 1.

Inventive features of claim 33 also include that for a first one of said orders determines a match to said first order with the responses and contra-side orders during the exposure time specified by said first order. This feature finds support at least as the analogous feature of claim 1.

Claim 40

Another aspect of Appellant's invention is set out in claim 40, as a system for auctioning financial products over a distributed, networked computer system. This feature finds support at least as the analogous feature of claim 1.

Inventive features of claim 40 include a plurality of workstations for entering orders for financial products into the distributed, networked computer system, the orders specify a price for the financial product, a quantity of the financial product and exposure time which the order can remain active. This feature finds support at least as the analogous feature of claim 1.

Inventive features of claim 40 also include a plurality of workstations for entering predefined relative indications, the predefined relative indications specifying a quantity and being undisclosed to participants in the market until and unless matched with an order and responses to orders for the product, the predefined relative indications, the responses specifying a price and quantity. "Referring now to FIG. 9C, a format for a pre-defined relative indication 107 is shown to include an information portion 107a which includes a security symbol, a relative price improvement, a quantity and an indication type, either buy or sell. The information 107a is also transmitted 107b to the auction system 20. In the auction system 20 the pre-defined relative indication is sorted 107c by type, e.g., buy or sell and by price and time received."

[Specification, page 18, line 29 to page 19, line 4]. "A pre-defined relative indication, therefore, is a willingness or an expression to trade that resides in the system and remains dormant and unseen by other participants. This mechanism also allows trading interest to remain anonymous as to price, size and identity. A pre-defined relative indication, when activated, becomes a

response that is priced relative to the National Best Bid/offer (NBBO)." [Specification, page 13, lines 24-30].

Inventive features of claim 40 also include a server computer coupled to the workstations for entering the orders, predefined relative indications, and the responses, with the server computer executing a server process, said server process comprising software. This feature finds support at least as the analogous features of claim 24.

Inventive features of claim 40 also include instructions to determine a match to a first order with the predefined relative indications, responses and contra-side orders during an interval determined by the exposure time specified by said first order. This feature with respect to responses and contra-side orders finds support at least as the analogous feature of claim 1. As to pre-defined relative indications, the feature is supported by: "These pre-defined relative indications 44, 46 are responses that are entered into the auction system 20 prior to entry of an order. They are relative, meaning that they are relative to what the NBBO is at the moment they can be matched with an order." [Specification, page 11, lines 28-32].

Claim 55

Another aspect of Appellant's invention is set out in claim 55 as a method of auctioning securities. This feature finds support at least as the analogous feature of claim 1.

Inventive features of claim 55 include entering an order for a security, the order specifying a condition that seeks a specific minimum relative price improvement and an exposure time for which the order can be exposed to responses. This feature finds support at least as the analogous feature of claim 1. The feature of a condition is supported at least by: "Referring now to FIG. 5, a fourth auction example 25d is shown. In this example 25d, a customer order 40' and condition 40a are entered to sell 600 shares of "XXY". The condition 40a is that the order seeks a specific minimum price improvement of ".02." [Specification, page 14, lines 1-5].

Inventive features of claim 55 also include entering a response to the order, the response specifying a price, which can be a relative or fixed price or a contra-side order that has a condition seeking a relative price improvement, and quantity. This feature finds support at least

as the analogous feature of claim 1. The contra side order having a condition is supported in a similar manner as the order having a condition is supported.

Inventive features of claim 55 also include matching the order with a first one of the response or the contra side order that satisfy conditions of the order in accordance with the exposure time specified by the order. This feature finds support at least as the analogous features of claim 1 and claim 33.

Claim 64

Another aspect of Appellant's invention is set out in claim 64 as a computer program product method of auctioning securities. This feature finds support at least as the analogous feature of claim 24.

Inventive features of claim 64 include instructions to receive an order for a security, the order specifying a condition that seeks a specific minimum relative price improvement and an exposure time. This feature finds support at least as the analogous feature of claim 55.

Inventive features of claim 64 also include instructions to receive a response to the order, the response specifying a price, which can be a relative or fixed price or a contra-side order that may have a condition seeking a relative price improvement, and quantity. This feature finds support at least as the analogous feature of claim 55.

Inventive features of claim 64 also include instructions to match the order with the response or contra-side order in accordance with the exposure time specified by the order. This feature finds support at least as the analogous feature of claim 55.

Claim 71

Another aspect of Appellant's invention is set out in claim 71, as a method of auctioning products, said method executed over a distributed networked computer system. This feature finds support at least as the analogous feature of claim 1.

Inventive features of claim 71 include entering an order for a product by specifying in the order at least conditions of a quantity of the product and an exposure time for which the order can be displayed for responses. This feature finds support at least as the analogous feature of claim 1.

Inventive features of claim 71 also include entering responses to the order, at least one of the responses specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing, current market price for the product, and quantity for the product. This feature finds support at least as the analogous feature of claim 1.

Inventive features of claim 71 also include entering pre-defined relative indications that correspond to a willingness to buy or sell the product, the pre-defined relative indications specify a price relative to a current market price and, which are dormant in the system and undisclosed to participants until and unless matched with the order. This feature finds support at least as the analogous feature of claim 40.

Inventive features of claim 71 also include matching the order with a first one of the responses or predefined relative indications that meets conditions specified by the order, during the exposure time specified by the order. This feature finds support at least as the analogous feature of claim 40.

(vi.) Grounds of Rejection to be Reviewed on Appeal

(1) Claims 1-13, 55-58, 64, and 71-78 stand rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

(2) Claims 3, 24-32 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement of 35 U.S.C. 112, first paragraph.

(3) Claims 2, 3, 20, 21, 24-32, 38 and 77 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

(4) Claims 1, 3-19, 21-40, 55-58, 64-76 and 78 stand rejected under 35 U.S.C. 103(a), as being unpatentable over Silverman et al., U.S. Patent No. 5,136,501 in view of Handa et al., "A Tale of Two Trading Venues: Electronically Delivered Orders vs. Floor Brokered Orders on the American Stock Exchange."

(5) Claims 2, 20 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverman et al., U.S. Patent No. 5,136,501 and Handa et al., "A Tale of Two Trading Venues: Electronically Delivered Orders vs. Floor Brokered Orders on the American Stock

Exchange", as applied to claim 1 above and in further view of Hawkins et al., U.S. Patent No. 6,029,146.

(7) Argument

Indefiniteness

It is not necessary for the claims to recite every element needed for practical utilization of the claimed subject matter in order for a claim to be proper under 35 U.S.C. §112, second paragraph, *Bendix Corp. v. United States*, 600 F.2d 1364, 1369, 204 U.S.P.Q. 617, 621 (Court of Claims, 1979). It is not the role of the claims to enable one skilled in the art to reproduce the invention, but rather to define the legal metes and bounds of the invention. *In re Geoffe*, 526 F.2d 1393, 1397, 188 U.S.P.Q. 131, (CCPA, 1975). The claims need not provide all operating details but a method claim should recite a positive step. *In re Erlich*, 3 U.S.P.Q. 2d 1011 (Bd. Pat. App. & Int., 1986).

Obviousness

"It is well established that the burden is on the PTO to establish a prima facie showing of obviousness, *In re Fritsch*, 972 F.2d. 1260, 23 U.S.P.Q.2d 1780 (C.C.P.A., 1972)."

"It is well established that there must be some logical reason apparent from the evidence or record to justify combination or modification of references. *In re Regal*, 526 F.2d 1399, 188 U.S.P.Q.2d 136 (C.C.P.A. 1975). In addition, even if all of the elements of claims are disclosed in various prior art references, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art why one of ordinary skill in the art would have been prompted to combine the teachings of the references to arrive at the claimed invention. *Id.* Even if the cited references show the various elements suggested by the Examiner in order to support a conclusion that it would have been obvious to combine the cited references, the references must either expressly or impliedly suggest the claimed combination or the Examiner must present a convincing line of reasoning as to why one skilled in the art would have found the claimed invention obvious in light of the teachings of the references. *Ex Parte Clapp*, 227 U.S.P.Q.2d 972, 973 (Board. Pat. App. & Inf. 1985)."

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, "[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Laskowski*, 10 U.S.P.Q. 2d 1397, 1398 (Fed. Cir. 1989).

"The claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984).

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under Section 103, teachings of references can be combined only if there is some suggestion or incentive to do so. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

"The critical inquiry is whether 'there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.'" *Fromson v. Advance Offset Plate, Inc.*, 225 U.S.P.Q. 26, 31 (Fed. Cir. 1985).

**(1) Claims 1-13, 55-58, 64, and 71-78 claim
statutory subject matter within the meaning of
35 U.S.C. 101.**

The examiner rejected Claims 1-13, 55-58, 64, and 71-78 under 35 U.S.C. 101, as directed to non-statutory subject matter.

According to the examiner, a determination of whether a claim recites patentable subject matter requires passing a two-prong test. The first prong of the test is that: "In order for a

sequence of operational steps to be statutory the steps must produce a useful, concrete and tangible result.” [Office Action page 2] The examiner also furnishes a second prong of the test, as: “In addition, a sequence of operational steps must also be in the "technological arts" (*In re Musgrave*, 431 F.2d 882, 167 USPQ 280 (CCPA 1970)). [Office Action page 2].

The examiner in rejecting Appellant's claims went on to state that:

Claims 1, 55, 64 and 71 do not fall within the technological arts because no form of technology is claimed. Specifically, the claims are silent regarding the role of a computer for achieving a practical application, such as entering an order or matching orders with responses (MPEP, 2100-17, section (ii), *Arrhythmia*, 958 F.2d at 1057, 22 USPQ2d at 1036). Hence, the claimed invention does not promote the progress of science and the useful arts. Claim 64 is also rejected as it is directed to a computer product that is not stored on a computer readable medium (MPEP, 2100-13, section (a)). Claims 2-13, 54-58, and 72-78 are also rejected as they depend from claims 1, 55, or 71. (Office action pages 3-4).

The examiner chose to rely on a perceived lack of a role for a computer or a computer readable medium storing the computer program product as the basis to argue that the claims cover non-statutory subject matter. Implicitly, the examiner accepted that the process claims produce “a produce a useful, concrete and tangible result” and that the computer program product claimed instructions that when executed produces a useful, concrete and tangible result.

Appellant contends that the Board has refused to adopt any such two-prong test, as most recently expressed in *Ex Parte Lundgren*, __ USPQ2d __ (BPAI Oct. __, 2005).² Moreover, the precedents that are binding on this Board and the examiner clearly reject the notion that *Musgrave* announced a two-prong test for determining whether claims recite statutory subject matter. Appellant contends that the test for statutory subject matter is whether a sequence of operational steps produce a useful, concrete and tangible result.

Because the Board has rejected the Technological Arts prong and the examiner has not refuted that the claims produce “a produce a useful, concrete and tangible result” the examiner's rejection must be reversed.

The Technological Arts Prong

The examiner contends that the second prong of the test requires a determination of

² Appeal No. 2003-2088 HEARD: April 20, 2004. (Fleming, Harkcom, Hairston, Jerry Smith (dissent), Barrett (concur-in-part, dissent-in-part, with Smith) (per curium))

whether an invention is within the "technological arts." Initially, the phrase "technological arts" as used by the court in *In re Musgrave* was viewed as expanding statutory subject matter. Indeed, Judge Baldwin in a concurring opinion in *Musgrave* contended that the "technological arts" test would have an expansive effect on what would be considered as statutory subject matter.³

Under the rationale expressed in *Musgrave*, all that was required to make a sequence of steps statutory is that the sequence be within the "technological arts." In *Musgrave*, the court held that:

We cannot agree with the board that these claims (all the steps of which can be carried out by the disclosed apparatus) are directed to non-statutory processes merely because some or all the steps therein can also be carried out in or with the aid of the human mind or because it may be necessary for one performing the processes to think. All that is necessary, in our view, to make a sequence of operational steps a statutory 'process' within 35 U.S.C. § 101 is that it be in the technological arts so as to be in consonance with the Constitutional purpose to promote the progress of 'useful arts.' Const. Art. 1, sec. 8.

However, the Court of Custom and Patent Appeals, in *In re Toma*, 575 F.2d 872, 197 U.S.P.Q. 852 (CCPA, 1978) clarified the use of the "technological arts" inquiry that the examiner relies on here. In *Toma*, the court held that: "The language which the examiner has quoted was written in answer to "mental steps" rejections and was not intended to create a generalized definition of statutory subject matter. Moreover, it was not intended to form a basis for a new §101 rejection as the examiner apparently suggests. To the extent that this "technological arts" rejection is before us, independent of the rejection based on Benson, it is also reversed." Id. 575 F.2d at 877.

Even though the court held in *Toma* that: "the invention was nothing more than an abstract idea which is not tied to any technological art, environment, or machine, and is not a

³ "What The Majority Opinion Does One need only read the page 893 of the opinion to find the principal holding: 'All that is necessary * * * to make a sequence of operational steps a statutory 'process' within 35 USC 101 is that it be in the technological arts.' No limitations are placed upon this holding. In effect it is a pronouncement of new law." Id. at 894

useful art as contemplated by the Constitution of the United States.”, *id.* at 877, the court did not adopt a new test but merely expressed a short cut for claims that do not define statutory subject matter, namely patent claims drawn solely to abstract ideas, laws of nature or mental steps.

In *Lundgren*, the Board specifically recognized that “there is currently no judicially recognized separate ‘technological arts’ test to determine patent eligible subject matter under § 101. We decline to propose to create one.” *Id.* __ USPQ2d at __.

The Board’s prior precedents fail to support the examiner contention of a two prong test. The Board in *Ex parte Bowman*, 61 U.S.P.Q.2d 1669 (Board of Patent Appeals and Interferences, 2001) acknowledged the role of technology, as distinguished from mental steps in affirming a §101 rejection.⁴ However, in *Bowman* the Board found that the disclosed and claimed invention was not tied to “any technological art or environment,” *id.* at 1671. In contrast to the situation presented to the Board in *Bowman*, Appellant’s specification is clearly within the technological arts and all of Appellant’s claims recite features within a technological art or an environment.

Even if the Board agrees that the second prong referred to by the examiner is necessary to find statutory subject matter, the examiner misconstrues the “technology arts” language of *Musgrave* for reasons as will be discussed below.

Specifically, with respect to Appellant’s claims the examiner contends that:

Claims 1, 55, 64 and 71 do not fall within the technological arts because no form of technology is claimed. Specifically, the claims are silent regarding the role of a computer for achieving a practical application, such as entering an order, matching orders with responses (MPEP, 2100-17, section (ii), Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036). Hence, the claimed invention does not promote the progress of science and the useful arts. Claim 64 is also rejected as it is directed to a computer product that is not stored on a computer readable medium (MPEP, 2100-13, section (a)). [Office Action pages 2, 3]

Claims 1-13 and 71-78

Claim 1 and claim 71 each call for “a method of auctioning products, said method

⁴ “The examiner finds that neither the specification nor the claims discuss the use of any technology with respect to the claimed invention [answer, pages 5-6]. [1] We agree with the examiner. Appellant has carefully avoided tying the disclosed and claimed invention to any technological art or environment. As noted by the examiner, the disclosed and claimed invention is directed to nothing more than a human making mental computations and manually plotting the results on a paper chart [answer, page 5].” *Bowman*, 61 U.S.P.Q.2d 1669 at 1671.

executed over a distributed networked computer system." Claim 1, for example, includes features of entering an order for a product by specifying in the order at least conditions of a quantity of the product and an exposure time for which the order can be displayed for responses. Claim 1 also specifies features of entering responses to the order ...; and matching the order ...

With respect to claims 1 and 71 the examiner overlooks that the recited methods are "executed over a distributed computer system." The examiner is not free to ignore this limitation, simply because it is in the preamble of these claims.⁵ Moreover, the examiner is not free to contend that the mere absence of a specific role for a computer makes the claims directed to non-statutory subject matter. *In re Musgrave*, 167 U.S.P.Q. 280 (CCPA, 1970) as clarified by *In re Toma*, 575 F.2d 872, 197 U.S.P.Q. 852 (CCPA, 1978).

Each of the claims produces a useful, concrete and tangible result, namely: "matching the order with a first one of the responses that meets all of the conditions specified by the order during the exposure time specified by the order, with matching of the first one of the responses with the order terminating the auction," (claim 1) or "matching the order with a first one of the responses or predefined relative indications that meets conditions specified by the order, during the exposure time specified by the order," (claim 71).

⁵ The courts have consistently held that for method claims the preamble is given patentable weight when it breathes life and meaning into the claims. See *Griffin v. Bertina*, 62 USPQ2d 1431 (Fed. Cir. 2002).

[A] claim preamble has the import that the claim as a whole suggests for it." *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620, 34 USPQ2d 1816, 1820 (Fed.Cir.1995). If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is "necessary to give life, meaning, and vitality" to the claim, then the claim preamble should be construed as if in the balance of the claim. *Kropa v. Robie*, 38 C.C.P.A. 858, 187 F.2d 150, 152, 88 USPQ 478, 480-81 (CCPA 1951); see also *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed.Cir.1997); *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed.Cir.1989). Indeed, when discussing the "claim" in such a circumstance, there is no meaningful distinction to be drawn between the claim preamble and the rest of the claim, for only together do they comprise the "claim". If, however, the body of the claim fully and intrinsically sets forth the complete invention, including all of its limitations, and the preamble offers no distinct definition of any of the claimed invention's limitations, but rather merely states, for example, the purpose or intended use of the invention, then the preamble is of no significance to claim construction because it cannot be said to constitute or explain a claim limitation. See *Rowe*, 112 F.3d at 478, 42 USPQ2d at 1553; *Corning Glass*, 868 F.2d at 1257, 9 USPQ2d at 1966; *Kropa*, 187 F.2d at 152, 88 USPQ at 480-81.

Claims 55-58

Claim 55 is directed to a method of auctioning securities. It includes the features of entering an order for a security, the order specifying a condition that seeks a specific minimum relative price improvement and an exposure time for which the order can be exposed to responses, entering a response to the order, the response specifying a price, which can be a relative or fixed price or a contra-side order that has a condition seeking a relative price improvement, and quantity and matching the order with a first one of the response or the contra side order that satisfy conditions of the order and in accordance with the exposure time specified by the order.

While no specific technology is recited in claim 55, the claim is nonetheless directed to statutory subject matter because, it is a sequence of operational steps that necessarily produces a useful, concrete and tangible result, namely: "matching the order with a first one of the response or the contra side order that satisfy conditions of the order and in accordance with the exposure time specified by the order." The Board om *Ex Parte Lundgren*, __ USPQ2d at __ specifically found that to be the only requirement for statutory subject matter given the Federal Circuit's decision in *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358, 50 USPQ2d 1447, 1452 (Fed. Cir. 1999).⁶

In contrast to the situation found by the Federal Circuit in *Toma*, where: "the invention was nothing more than an abstract idea which is not tied to any technological art, environment, or machine, and is not a useful art as contemplated by the Constitution of the United States.", *id.* at 877," here claim 55 is a sequence of operational steps tied to a specific environment, namely a method of auctioning securities.

⁶ "In reviewing the examiner's "Response to Argument" set forth at pages 3-8 of the Examiner's Answer of May 1, 2003, we first note that the examiner states that "the part of the 35 U.S.C. § 101 rejection that asserted that claims 1, 2, 6, 7, 19-22, 32, and 35-40 fail to produce a useful, concrete, and tangible result is withdrawn." By withdrawing this rejection, it can be concluded that the examiner has found that the process claims on appeal produce a useful, concrete, and tangible result.

Since the Federal Circuit has held that a process claim that applies a mathematical algorithm to "produce a useful, concrete, tangible result without pre-empting other uses of the mathematical principle, on its face comfortably falls within the scope of § 101," *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358, 50 USPQ2d 1447, 1452 (Fed. Cir. 1999), one would think there would be no more issues to be resolved under 35 U.S.C. § 101." *Ex Parte Lundgren*, __ USPQ2d at __

Claim 64

Claim 64 calls for a computer program product method of auctioning securities. Claim 64 includes instructions to cause a computer to perform specified acts. Claim 64 is directed to statutory subject matter, since the instructions operably cause the computer to perform the recited acts. The Federal Circuit in *In re Warmerdam*, 33 F.3d , 1354 31 USPQ2d 1754 (Fed. Cir.1994) found claims directed to data structures per se non statutory.⁷ Unlike the situation in presented in *Warmerdam*, claim 64 calls for instructions to cause a computer to perform a specific operational sequence and therefore is not directed to "nonfunctional descriptive material" such as music, literary works and a compilation or mere arrangement of data. In addition, claim 64 produces a useful, concrete and tangible result, namely to "match the order with the response or contra-side order in accordance with the exposure time specified by the order."

**(2) Claims 3, 24-32 are described and enabled by
Appellant's specification within the meaning of
35 U.S.C. 112, first paragraph.**

Claims 3, 24-32 are fully supported by Appellant's specification as filed. The examiner contends that:

Claims 3, 24-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 3 and 24 recite changing the price of a submitted response.

However, the Specification is silent regarding a user submitting a response with a relative price, then re-access the submitted response in order to update the price. And, although the Applicant refers to "new pre-defined relative conditions" the Specification is unclear as to how this relates to a submitted response price (Specification, figures 10A-B; page/line 19/5-2213).

⁷ "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data. Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se. *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 158384, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Manual Of Patent Examining Procedure §2106 page 2100-12 rev. May 20.04

Claim 3

The examiner has misconstrued features of this claim. Claim 3 recites that the price of the response changes with changes in the generally accepted indicator during the life of the order having an impact on the final price of the order. In no fashion would any person, and in particular a person of ordinary skill in the art construe the claim as requiring: "changing the price of a submitted response" or having "a user submitting a response with a relative price, then re-access the submitted response in order to update the price." As was clearly discussed above, in support of the relative pricing features of claim 1, one type of response is a response that is priced relative to a generally accepted indicator of a prevailing market price. This pricing indicator fluctuates in price and thus causes changes in the price of the relatively priced response.

Claim 24 recites in part: "with the relative portion of the price fluctuating according to changes in a national best bid/offer price that is periodically published during the auction." As with claim 3, one of ordinary skill in the art would not construe claim 24 in the manner done by the examiner. Rather, one of ordinary skill would understand that claim 24 has a relative price portion that changes when and if the NBBO changes. Claims 25-32 are proper for analogous reasons as in claim 24.

Accordingly, Appellant's claims are fully supported by the specification.

**(3) Claims 2, 3, 20, 21, 24-32, 38 and 77
particularly point out and distinctly claim the
subject matter of appellant's invention within
the meaning of 35 U.S.C. 112, second paragraph.**

Claims 2, 3, 20, 21, 24-32, 38 and 77 are proper under 35 U.S.C. 112, second paragraph.
The examiner contends that:

- a. Claims 2, 20 and 77 are rejected for indefiniteness as it recites the language "less than or equal to about 30 seconds" (2173.05(b) "about"; Amgen, Inc. v. Chugai Pharmaceutical Co. 927 F.2d 1200, 1800 USPQ2d 1016 (Fed. Cir. 1991)).
- b. Claim 3 recites the limitation "the price of the responses changes" in line 2. There is insufficient antecedent basis for this limitation in the claim.
- c. Claims 3 and 24 recite updating a price for a submitted response. However, to one of ordinary skill it is not clear how this is possible as the Applicant does not disclose how a user can submit a response with a relative price, then re-access the submitted response in order to update the price (Specification, figures 10A-B; page/line 19/5-2213). Claim 77 contains similar language. Claims 25-32 are

also rejected as they depend from claim

d. Claim 21 recites the limitation "the process" in line 1. There is insufficient antecedent basis for this limitation in the claim.

e. Claim 38 recites "pre-defined relative indications that can exist in the system before an auction for the product has started." However, claim 33, from which claim 38 depends clearly states that responses are entered in response to an order, therefore, claim 38 contradicts the condition for entering a response of claim 33. Otherwise, Applicant's "response" becomes the order and the "order" becomes the response as the response entered the system first (Specification, page 11, lines 20-32).

With respect to claims 2, 20 and 77, Appellant's use of the word "about" does not render these claims indefinite. Rather, the term "about" properly lends a degree of tolerance to a claimed range. See *Modine Manufacturing Company v. United States International Trade Commission*, 75 F.3d 1545, 37 U.S.P.Q.2d 1609 (Fed. Cir. 1996).⁸

Claim 3 recites the limitation "the price of the responses changes" in line 2. This limitation finds antecedent basis in claim 1 by the feature of entering responses to the order, at least some of the responses specifying a relative price with a price improvement.

Claim 3 and claim 24 do not recite "updating a price for a submitted response," as contended by the examiner. Claim 3 for instance recites that "the price of the response changes with changes in the generally accepted indicator during the life of the order."

Claim 21 depends from claim 14, which calls for a method and provides sufficient basis for the limitation "the process" in line 1 of claim 21. In the alternative, Appellant is willing to concede that claim 21 has a minor antecedent basis error.

Claim 38 allows the response workstations to enter pre-defined relative indications that can exist in the system before an auction for the product has started. With respect to claim 38, the examiner questions how pre-defined relative indications can exist in the system before an auction for the product has started. The examiner refers to claim 33, from which claim 38 depends as requiring that: "responses are entered in response to an order"

However, the examiner has confused pre-defined relative indications with responses. In Appellant's system, as set out above in supporting the limitations of claim 40, pre-defined

⁸ Mathematical precision should not be imposed for its own sake; a patentee has the right to claim the invention in terms that would be understood by persons of skill in the field of the invention. See *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 624, 225 USPQ 634, 641 (Fed.Cir.), cert. dismissed, 474 U.S. 976, 106 S.Ct. 340, 88 L.Ed.2d 326 (1985) ("if the language is as precise as the subject matter permits, the courts can demand no more").

relative indications can exist in the system before an order is received and an auction has started. That is one of the features of pre-defined relative indications, which distinguishes pre-defined relative indications from responses and orders. Thus, while pre-defined relative indications are treated as a response when executed, the pre-defined relative indication has features that are different than those of a response.

Therefore, contrary to the examiner's contention, claim 38 does not contradict the condition for entering a response, as recited in claim 33. The examiner's contention that: "Otherwise, Applicant's "response" becomes the order and the "order" becomes the response as the response entered the system first (Specification, page 11, lines 20-32).," is completely without merit. The cited passage from Appellant's specification is quoted below:

In this auction example 25b, the customer order 40 will accept whatever the best bid is at the time the order 40 is entered. The customer places a 15 second lifetime on the order 40. Assume that the NBBO price 42 at the time the order is entered is 49-49 1/8, and that broker/dealer B and broker/dealer C had previously entered pre-defined relative indications to buy, 44, 46, respectively. These pre-defined relative indications 44, 46 are responses that are entered into the auction system 20 prior to entry of an order. They are relative, meaning that they are relative to what the NBBO is at the moment they can be matched with an order. A ranking process 105 that prioritizes received pre-defined relative indications by price improvement and time is described in FIG. 11.

Appellant contends that there is no support for the examiner's misleading contentions. This passage teaches what the subject matter of claim 38 encompasses, namely that: "These pre-defined relative indications 44, 46 are responses that are entered into the auction system 20 prior to entry of an order." [Specification page 11, lines 26-28]. However, as Appellant pointed out above: "A pre-defined relative indication, when activated, becomes a response that is priced relative to the National Best Bid/offer (NBBO)." [Specification page , line]. Accordingly, claim 38 is fully supported by Appellant's specification and is not inconsistent with claim 33, since it merely adds an additional capability to the workstations for entering responses as mentioned in claim 33.

(4) Claims 1, 3-19, 21-40, 55-58, 64-76 and 78 are patentable over Silverman et al., U.S. Patent No. 5,136,501 in view of Handa et al., "A Tale of Two Trading Venues: Electronically Delivered Orders vs. Floor Brokered Orders on the American Stock Exchange."

Claims 1, 4-6, 9, 10, 13, 24-32, 73 and 75

For the purposes of this appeal only, claims 1, 4-6, 9, 10, 13, 24-32, 73 and 75 stand or fall together. Claim 1 is representative of this group of claims.

Claim 1 is directed to a method of auctioning products over a distributed networked computer system. Distinguishing features of claim 1 include entering an order for a product by specifying in the order an exposure time for which the order can be displayed for responses, entering responses to the order, at least some of the responses specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price and matching the order with a first one of the responses that meets all of the conditions specified by the order during the exposure time specified by the order, with matching of the first one of the responses with the order terminating the auction. Silverman et al., U.S. Patent No. 5,136,501 in view of Handa et al., do not suggest at least these features of claim 1.

The examiner contends that the feature of "entering an order for a product by specifying in the order a quantity of the product and an exposure time for which the order can be displayed for responses," is found in Silverman at: "(abstract; figures 2, 4, and 5; column 8, lines 45-64; column 10, lines 2-10; column 21, lines 5-16).

Silverman is directed to a matching system that implements credit controls to determine the quantity of permissible match at the lowest common credit limit and the best bid/ask price for the largest available quantity to automatically complete a match. [Silverman Col. 1, line 64 to Col. 2 line 3]. Silverman while acknowledging auctions as prior art, and mentioning auction markets in connection with Figs. 15 and 16, does so only to further describe operation of sub-books, (order books), but does not otherwise describe or suggest features of an auction. For claim 1, Silverman does not suggest the feature of "specifying in the order ... an exposure time for which the order can be displayed for responses" in the cited passages of Silverman or

elsewhere. Appellant has reproduced below the relied on excerpts from column 8, lines 45-64; column 10, lines 2-10; column 21, lines 5-16).

In addition, as shown and preferred in FIG. 2, a bid update message is broadcast by the central station 20 to all keystations in the system, such as represented by reference numeral 34a in FIG. 2. This broadcast message 34a preferably occurs if this new bid 32a was the new best bid in the system, or was an additional quantity being bid at the best price in the system. Thus, if this new bid 32a is at the highest price or better or higher, then it will result in a bid update broadcast message 34a going out throughout the system. In addition, as also shown by way of example in FIG. 2, if it is desired to disseminate an external ticker 60, then the ticker information 60 will also be provided of the best bid or best offer. Preferably, the same procedure is followed with respect to entry of an offer with the messages, in this instance, being identified as offer, given reference numeral 51, offer acknowledgment or OFFER-ACK, given reference numeral 32b, and the broadcast message for offer update, being given reference numeral 34b. [Silverman column 8, lines 45-64]

In the above passage, Silverman deals with prices and a bid update message. Nothing in the cited passage deals with exposure time of the order.

This convention is also followed in connection with the keystation book of FIG. 5 which is a subset of the system or central station or host book of FIG. 4. Thus, as can be seen in FIG. 5, the keystation books located at the client sites 26 maintain copies of the best bids and offers contained in the host book of FIG. 4 and use that information to generate displays at the keystations 24. In addition, as was previously mentioned, the display depth of the keystation book is controlled by the host computer 20. [Silverman column 10, lines 2-10]

In this passage, Silverman deals with prices and a host book. Nothing in the cited passage deals with exposure time of the order.

Preferably, the system of the present invention supports four different order types which are used to buy or sell instruments in the matching system of the present invention. These order types are referred to as bid, offer, hit (also known as yours), and take (also known as mine). These orders are preferably differentiated (sic) from one another according to a set of time, price and size constraints which are either explicitly or implicitly (sic) provided at the time of order entry. Preferably all system orders, regardless of type, are price limit orders. This means that the order, whether it be bid, offer, hit, or take, is preferably restricted to execute at the specified price or better. For a bid or take, the term "or better" preferably means at the specified price or lower, whereas for an offer or hit, this term preferably means at the specified price or higher. Furthermore, every system order must preferably carry one of two possible time constraints which are actually implied by the order type. Hit and take orders have the implied constraint fill-or-kill (FOK). These orders must be fully or partially filled at the time they are presented and then they are removed from the system or killed. Bid and offer orders preferably have the applied constraint good 'till cancel (GTC). These orders preferably must remain in the system until explicitly (sic) cancelled or until the end of the user's session. In

addition to these order limitations, all orders must preferably specify primary quantity. In the case of bid and offer orders, more quantity may also be preferably included with the order but only if a primary quantity is also included. FIG. 19 is aN (sic) illustration of the order types implemented in the system of the present invention with fill-or-kill represented by the expression FOK and good-till-cancel represented by the expression GTC. It should be noted that preferably hit or take specifies a price which crosses the market, that is a hit with a price lower than the best bid, and is effectively a market order in the sense of the commodities markets and will execute at the best available price, and will go as far into the order book as needed until the order is filled or the limit price is reached. [Silverman Col. 20, line 58 to Col. 21 line 29, which includes column 21, lines 5-16, cited by the examiner]

In the above passage, Silverman discusses two order types "fill-or-kill" represented by the expression "FOK" and "good-till-cancel" represented by the expression "GTC." Nothing in the cited passage nor these specific order types suggests: "entering an order for a product by specifying in the order an exposure time for which the order can be displayed for responses," as recited in claim 1.

Silverman teaches "Hit and take orders have the implied constraint fill-or-kill (FOK)." These orders must be fully or partially filled at the time they are presented and then they are removed from the system or killed. However, that is not an order specifying an exposure time. No time is specified by a FOK order. It is an unspecified time, only being removed when fully or partially filled. Silverman also teaches that "Bid and offer orders preferably have the applied constraint good 'till cancel (GTC)." These orders preferably must remain in the system until explicitly cancelled or until the end of the user's session. Again, GTC does not suggest "an order specifying an exposure time." No time is specified by a GTC order. Rather a GTC order has an unspecified time and requires an explicit cancellation or termination of a user session. Accordingly, Silverman does not teach this feature of claim 1.

Appellant's claim 1 also includes the limitation of entering responses to the order, at least some of the responses specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price. The examiner contends that Silverman suggests this limitation "(figure 4)."

Silverman fails to suggest any of the features of this limitation, namely, a response or some of the responses specifying a relative price with a price improvement, with the relative price being relative to a generally accepted indicator of a prevailing current market price.

Fig. 4 of Silverman does not show any of the features of this limitation. Rather, Silverman merely shows an arrangement of offers and bids in a sequence of value and time. The examiner cannot take from this teaching the features of: "responses specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price."⁹ Silverman neither teaches a relative price nor a price improvement.

Claim 1 also requires matching the order with a first one of the responses that meets all of the conditions specified by the order during the exposure time specified by the order, with matching of the first one of the responses with the order terminating the auction. Silverman is directed to a matching system. As such, Silverman fails to suggest "a first one of the responses that meets all of the conditions specified by the order during the exposure time specified by the order ... terminating the auction."

The examiner does admit that Silverman et al. does not recite the term "price improvement." The examiner contends that Handa et al., "A Tale of Two Trading Venues: Electronically Delivered Orders vs. Floor Brokered Orders on the American Stock Exchange" teaches this feature. The Board in its prior decision reversing the examiner cited this reference as of interest.¹⁰ Claim 1 requires: "entering responses to the order, at least some of the responses

⁹ In the previous appeal to this Board, the examiner took the position that the Harrington reference taught a prevailing market price (Office Action of June 26, 2003 pages 8 and 9). However in the Board's prior decision (referred to in the related proceedings appendix) the Board stated on page 12:

We agree with appellants that a "best bid" is not equivalent to a "generally accepted indicator of a prevailing current market price." In the original issue auctions described by Harrington, the auction is setting the market price; unlike a stock market or secondary market there is no available market price. However, assuming that a "best bid is a "prevailing current market price, in the loose sense that it is what the market is willing to pay, it is not considered a "generally accepted indicator because the bids are continuously changing and has only been accepted by one bidder. In addition, while each incoming bid is at price improvement" over the preceding bid, that bid is not a "relative price," which is defined as "being relative to a generally accepted indicator of a prevailing current market price," because there is no "generally accepted indicator of a prevailing current market price and because the bid specifies an absolute price, not a price "relative" to the preceding bid.

¹⁰ "Citation of reference

The article A Tale of Two Trading Venues: Electronically Delivered Orders vs. Floor Brokered Orders on the American Stock Exchange by Puneet Handa et al., Proceedings of the 32nd Hawaii International Conference on System Sciences - 1999, evidently published January 1999 (footnote 1), copy attached, is cited of interest because it

specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price.” Handa on the other hand teaches that:

There is also evidence of differential price improvement across the two venues. The empirical findings are that price improvement on the Amex is not simply a matter of chance or bargaining ability, but that it is an important part of the underlying price discovery process.² [Handa page 1]

²When a floor trader steps ahead of the book to execute against an in-coming contra-side market order, the market order trader receives price improvement. For further discussion, see Handa, Puneet, Robert Schwartz, and Ashish Tiwari, 1998 Price discovery and price improvement on a primary market: evidence from the American Stock Exchange, Journal of Portfolio Management, 1999, forthcoming.

With human intervention, the two-step process is less clear. The contra-side order may be price improved⁶ and two contra-side floor traders may meet and negotiate a trade with neither being identifiable as the revealer of the price or the initiator of the trade. The very subtlety of the trade initiation, price disclosure process in floor trading distinguishes floor trading from electronic trading. [Handa page 3]

⁶ Price improvement occurs when a market buy order executes at a price lower than the lowest posted offer or a market sell order executes at a price higher than the highest posted bid.

Handa teaches price improvement as a possible consequence of a face to face meeting between two floor traders. Handa fails to suggest a technique requiring price improvement, as a price that is entered into a distributed system for conducting an auction based on a generally accepted indicator of a prevailing market price. Handa and Silverman also fail to suggest the feature of relative pricing. Handa also fails to correct any of the noted deficiencies that Appellant has pointed out in the teachings of Silverman, as applied to claim 1. Accordingly

discusses contra-side market orders, price improvement, anonymous orders (footnote 8), and electronic trading (e.g., footnote 3).” [Peter B. Madoff, et al. Appeal No. 2004-2085, (Board of Patent Appeals and Interferences, Heard: March 8, 2005, Appeal) page 27]

claim 1 is allowable over Silverman and Handa since when combined the references fail to suggest all of the features of Appellant's claim 1.

In addition, Appellant does not concede that there exists any suggestion to combine the teachings of Silverman with Handa. "It is well established that there must be some logical reason apparent from the evidence or record to justify combination or modification of references." *In re Regal*, 526 F.2d 1399, 188 U.S.P.Q.2d 136 (C.C.P.A. 1975). One of ordinary skill in the art would not be motivated to combine the teachings of Handa with Silverman because Handa is directed to floor-based manual trading (e.g., the American Stock Exchange) with electronic order routing, whereas Silverman is concerned with an electronic matching system. Neither Handa nor Silverman would provide any motivation to support the combination of references. The examiner proffers a motivation: "as it is an important part of the underlying price discovery ('501, figure 4) process" [Office action page 8]. However, price discovery is of no import to either the claimed invention or to the system disclosed in Silverman, since in claim 1 there is an indicator of a generally accepted indicator of a prevailing market price, whereas Silverman is merely a matching network. According, claim 1 and Claims 4-6, 9, 10, 13, 24-32, 73 and 75 are allowable over Silverman and Handa.

Claim 2

Claim 2 limits the extent of the auction by specifying a relatively short exposure time to less than or equal to about 30 seconds. Neither Silverman nor Handa suggest this feature. A short exposure time would not serve any purpose in a matching network, as taught by Silverman. Claim 2 is directed to a fast moving market where prices of products are generally known, but where such prices can and do fluctuate based on supply and demand for the particular product.

Claim 3

Claim 3 sets forth the feature that the price of the response changes with changes in the generally accepted indicator during the life of the order and the price of the response has an impact on the final price of the order. The examiner apparently did not address any argument to this feature other than the contention made in rejection of claim 1 that a generally accepted indicator was shown in FIG. 4 of Silverman.

For all of the reasons discussed in claim 1, the examiner is incorrect in ignoring this limitation in claim 3. Claim 3 specifically recites that prices of the responses change and that the prices of the responses affect the final price at which the order is matched. It is apparent therefore that Silverman taken with Handa fail to teach this limitation. Silverman does not have responses, as claimed in claim 1, and does not have responses that have prices that change with changes in the generally accepted indicator during the life of the order, as recited in claim 3.

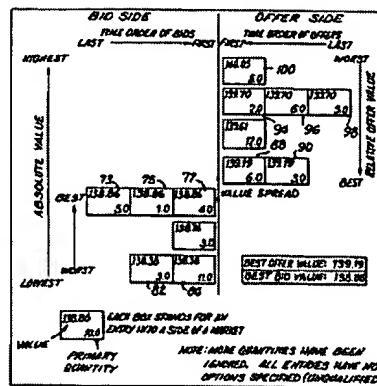
Claims 7, 8, 11, 12 and 76

Claim 7 is representative of this group of claims and is directed to the feature of entering pre-defined relative indications that correspond to a willingness to buy or sell the product. Claimed features of the pre-defined relative indications are that they specify a price relative to a current market price and are undisclosed to participants in the market until and unless matched with an order. An unmatched portion of the PRI continues to remain undisclosed until matched or withdrawn.

The examiner contends that Silverman teaches pre-defined relative indications in Fig. 4 (reproduced below). Silverman's Fig. 4 depicts a trading book that displays bids and offers. These bids and offers however fail to suggest the features of pre-defined relative indications.

Unlike Appellant's claimed pre-defined relative indications, Silverman fails to teach the feature of specifying a price relative to a current market price. In addition, unlike Appellant's claimed pre-defined relative indications, Silverman fails to teach that the pre-defined relative indication are undisclosed to participants until and unless matched with an order. Silverman describes to display bids and offers. Hence, Silverman teaches to make the bids and offers known to market participants. The examiner seems to equate the feature of pre-defined relative indications being undisclosed to participants in the market until and unless matched with an order, with Silverman's description that the source of the bids and offers remains anonymous. This is clearly in error. Silverman fails to teach the feature of being undisclosed to participants by describing anonymous bids and offers. Rather, Silverman teaches away from this feature by disclosing that the bids and offers are displayed.

FIG. 4
 CENTRAL STATION BOOK



The examiner appears to acknowledge deficiencies in the teachings of Silverman as applied to claim 7, and relies on Handa to cure such deficiencies. The examiner stated: "Handa et al. also disclose keeping a pre-defined relative indication undisclosed until matched with an order (page 3, section 2, third paragraphs page 4, line 5)."¹¹ [Office Action page 8] Apparently, the examiner's contention is that a "not-held order" corresponds to a pre-defined relative indication. Handa teaches in part:

Floor brokers commonly work "not-held" Orders⁷ revealing little or nothing about an order to the market while awaiting the arrival of contra-side orders.

⁷ A floor broker executes a not-held order at his or her own discretion attempting to get the customer a better price than the posted bid or offer, while "not being held" to the price existing at the time of the order's arrival if he or she eventually fills the order at a worse price.

The footnote 7 in Handa clearly shows the distinction between a pre-defined relative indication and the "not-held order." In Handa, the order is executed at the discretion of the floor

¹¹ Appellant contends that a face to face meeting between two floor brokers can have practical implications regarding the anonymity of the parties involved in the auction in that in many instances one that is familiar with the exchange can generally guess who the floor broker is working an order for.

broker (because of face to face discussions with one or more floor brokers) in an attempt to get a better price for the customer than the posted bid or offer price. In contrast, the pre-defined relative indication of claim 7 is executed if it satisfies an order, (no discretion) and seeks to give price improvement to the order entered in Appellant's system, not to itself, as in the "not-held order" of Handa. Handa recognized (Handa, footnote 7) that situations arise in which an order can be filled at a worse price. One can logically conclude that this less favorable price results from the manual, subjective handling of the order. In contrast, Appellant's claim 7 provides price improvement that is non-discretionary and is based on standardized pricing benchmarks that exist in the market place (e.g., NBBO).

Pre-defined relative indications also specify the relative pricing aspects of responses as argued above, and neither Silverman nor Handa suggest relative pricing for all of the reasons discussed above.

Claims 14-23

Claim 14 is representative of this group of claims and is directed to a method of auctioning financial products over a distributed, networked computer system. Features of claim 14 include entering orders for financial products with the orders specifying an exposure time for which the order can remain active. Claim 14 also has the feature of entering responses that specify a price and quantity.

Orders are matched against responses and contra-side orders, during an interval determined by the exposure time specified in the orders. According to claim 14, when a first one of the responses or contra side orders meets the conditions specified by the order the auction is terminated or the order expires if no matching responses or contra-side orders are received during the exposure period.

The references fail to suggest orders specifying an exposure time for which the order can remain active. Moreover, neither Silverman nor Handa suggest responses, nor do the references suggest that the responses and/or contra-side orders that fully meet the terms of the order terminate the auction.

Claims 33, 34, 36 and 39

Claim 33 is representative of this group of claims and is directed to a system for auctioning financial products over a distributed network.

The features of claim 33 include a plurality of workstations for entering orders for financial products by specifying in the order an exposure time for which the order is displayed for responses and a plurality of workstations for entering responses to orders for the product. Claim 33 also features a server computer executing a server process that for a first one of said orders determines a match to said first order with the responses and contra-side orders during the exposure time specified by said first order.¹²

The examiner contends that Silverman discloses entering orders that specify an exposure time. Appellant disagrees for the reasons discussed above. Appellant further contends that Silverman taken with Handa fail to suggest this feature, as well as the feature of entering responses to orders for the product. Silverman taken with Handa also fails to suggest “a server computer ... executing a server process that for a first one of said orders, determines a match to said first order with the responses and contra-side orders during the exposure time specified by said first order.” Appellant contends that neither Silverman nor Handa whether separately or together teach entering orders with exposure time or entering responses to the order.

Claim 35

Claim 35 further limits the system of claim 34 by reciting that at least some of the responses specify the price, as a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price for the product.

Silverman taken with Handa fail to suggest these features pertaining to relative prices and price improvement, for the reasons discussed in claim 1.

¹² In the prior decision of the Board, the Board took the position that orders and bids, as discussed in Harrington, were the same. Appellant at oral hearing sought to bring to the attention of the Board several dictionary definitions that clearly showed that a distinction exists in the art between bids and orders. Those dictionary definitions are now of record. In view of those definitions, it is clear that bids and offers are different from orders.

Claim 37

Claim 37 further limits the system of claim 36 to require that the conditions recited in claim 36 include a price improvement. Neither Silverman nor Handa suggest that a condition attached to an order includes a price improvement. Handa's "not-held orders" are worked by floor brokers at their discretion in an attempt to get the customer (of the "not-held order") a better price than the posted bid or offer, while "not being held" to the price existing at the time of the order's arrival if he or she eventually fills the order at a worse price.

This does not qualify as a condition attached to an order that seeks price improvement. Unlike the situation described in Handa, the condition recited in claim 37 is not discretionary in that the condition determines whether a response can be matched to the order. Whereas, Handa uses the discretion of a floor broker, which can result in an inferior execution for the customer, Appellant's claim 37 is not discretionary. In claim 37, an inferior execution is not possible, since if the condition is not met, there is no match or execution.

Claim 38

Claim 38 recites that the response workstations can enter pre-defined relative indications that can exist in the system before an auction for the product has started.

Neither Silverman nor Handa whether taken separately or in combination suggest a pre-defined relative indication. As defined by Appellant in claim 38, a pre-defined relative indication can exist in a system before an auction commences. The examiner acknowledges that "Silverman et al. do not specifically recite pre-defined relative indications that can exist in the system before an auction for the product has started." Appellant contends that absent this feature, Silverman cannot disclose the pre-defined relative indication, as claimed in claim 38.

Apparently, the examiner finds the limitation of "pre-defined relative indications existing in the system before an auction for the product has started" as taught by the Handa order book. However, the order book in Handa et al. is not the same as nor suggests pre-defined relative indications, since the book is used to hold orders that are not filled. Furthermore, once the orders are placed on the book, their price is fixed and they lose the opportunity for price improvement (unlike predefined relative indications that give price improvement) since they are no longer eligible for handling. Thus, not only do the orders on the book fail to suggest pre-defined

relative indications, since they lose the opportunity for price improvement when placed on the book, they give pricing improvement to the wrong entity before being placed on the book by seeking price improvement to themselves rather than another order.

Claim 40, 65-70

Claim 40 is representative of this group of claims and is directed to a system for auctioning financial products over a distributed, networked computer system. In addition to the novel features of, a plurality of workstations for entering orders that specify a price for the financial product, a quantity of the financial product and exposure time which the order can remain active and a plurality of workstations for entering responses to orders for the product, claim 40 also includes the limitation of pre-defined relative indications specifying a quantity and being undisclosed to participants in the market until and unless matched with an order. Both the pre-defined relative indications and the responses specify a price and quantity. Claim 40 includes a server computer to determine a match to a first order with the predefined relative indications, responses and contra-side orders during an interval determined by the exposure time specified by said first order.

In claim 40, a pre-defined relative indication resides in the system and remains dormant and unseen by other participants. That is, the pre-defined relative indication mechanism allows trading interest to remain dormant and anonymous as to price, size, existence and identity. A pre-defined relative indication, when activated, becomes a response that is priced relative to a standard reference quote, e.g., the National Best Bid/offer (NBBO).

The examiner contends that Silverman and Handa disclose pre-defined relative indications. The examiner states:

As per claims 38, 40, 56, and 68-72, Silverman et al. disclose an order book system for matching orders (e.g. "fill or kill") with conditions (e.g, exposure time, price and quantity) (column 21, lines 5-16), pre-defined relative indications (e.g. price relative to a market price) (figure 4) such as executing all of the order or none of the order (column 21, lines 8-11), with responses (abstract). Silverman et al. also teach withholding book data from users (figures 4 and 5; column 10, lines 21-28). However, Silverman et al. do not specifically recite pre-defined relative indications that can exist in the system before an auction for the product has started. Handa et al, teach a book system where orders (i.e. Applicant's responses) are maintained in secret until a contra-side order arrives (i.e. Applicant's order) (page 3, section 2, third paragraph). Handa et al. also disclose price improvement (page 1, "Introduction", second paragraph; page 3, footnote 6). Therefore, it would have

been obvious to one of ordinary skill to modify the order book system ('501, figure 4) of Silverman et al. to maintain "not-held orders in order to prevent a price change that would adversely affect a customer. (Handa et al., page 3, section 2, fourth paragraph).

Appellant disagrees. Silverman fails to disclose any of the features of these claims, e.g., exposure time, responses, and the predefined relative indications. Silverman fails to disclose pre-defined relative indications specifying a quantity and being undisclosed to participants in the market until and unless matched with an order. Handa's teachings of a "not-held order" fails to cure the deficiencies in Silverman, as pointed out above. Appellant contends that there is no suggestion to modify Silverman with Handa, as pointed out above, and further that any modification of Silverman with Handa would fail to suggest the features of claim 40, namely the order having an exposure time and the pre-defined relative indication features.

The examiner contends that it would have been obvious to one of ordinary skill to modify the order book system ('501, figure 4) of Silverman et al. to maintain "not-held orders" in order to prevent a price change that would adversely affect a customer. (Handa et al., page 3, section 2, fourth paragraph). However, as pointed out above this motivation must necessarily fail because once the "not-held order" is placed on the book; its price becomes fixed and thereafter loses the opportunity for price improvement.

Moreover, contrary to the examiner's contention neither the orders nor the book taught by Handa are maintained in secret until a contra-side order arrives. Rather, what is maintained secret by Handa are the identities of the order entrants, not the existence of the orders themselves. However, claim 40 requires predefined relative indications being undisclosed to participants in the market until and unless matched with an order.

Claims 55-58

Claim 55 is representative of this group of claims and is directed to a method of auctioning securities. Claim 55 features the limitations of entering an order for a security and an exposure time for which the order can be exposed to responses, which as discussed above distinguishes over Silverman and Handa.

Claim 55 is further limited to a conditioned order namely an "order specifying a condition that seeks a specific minimum relative price improvement." Neither Silverman nor

Handa teach an order specifying a specific minimum relative price improvement. The examiner acknowledges this to be the case with respect to Silverman, choosing to rely on Handa.

While Handa mentions that under certain conditions when a floor broker steps ahead of the book, the market order trader receives price improvement; such teaching fails to suggest “an order having a condition that seeks price improvement.” A market order as taught in Handa, and which would be understood by one of ordinary skill in the art, is simply that, a market order; an order that is executed at whatever the market price is at the time the order is executed. Simply because of the happenstance that a human being decides to step ahead of the book and as a result, price improvement accrues to an order, as taught by Handa, does not suggest an order that specifies a minimum price improvement as a condition attached to the order.

Claims 71, 72, 77 and 78

Claim 71 is representative of this group of claims. Claim 71 includes the features of entering an order for a product by specifying in the order at least conditions of an exposure time for which the order can be displayed for responses and entering responses to the order, responses specifying a relative price with a price improvement, as discussed above. Claim 71 also recites entering pre-defined relative indications, which distinguishes as discussed above. Claim 71 further distinguishes by reciting that the pre-defined relative indications specify a price relative to a current market price Neither Silverman nor Handa taken separately or in combination suggest pre-defined relative indications that specify a price relative to a current market price.

Claim 64

Claim 64 combines the limitations of the order specifying a condition that seeks a specific minimum relative price improvement and an exposure time. Claim 64 recites instructions to match the order with the response or contra-side order in accordance with the exposure time specified by the order. Neither the element of the condition that seeks a specific minimum relative price improvement nor the feature of the exposure time are found in Silverman or Handa taken separately or in combination, and hence the combination of these features serves to further distinguish claim 64 over the references.

(5) Claims 2, 20 and 77 are patentable over Silverman et al., U.S. Patent No. 5,136,501 and Handa et al., "A Tale of Two Trading Venues: Electronically Delivered Orders vs. Floor Brokered Orders on the American Stock Exchange," and in further view of Hawkins et al., U.S. Patent No. 6,029,146.

Claims 2 and 77

Claims 2 and 77 each limit their respective base claims in which the exposure time specified by the order is less than or equal to about 30 seconds.

The examiner relies on Hawkins for this teaching. According to the examiner:

Hawkins et al. teach an order creation program where a user can create an order with specific price, quantity and time limit parameters (figures 10 and 11) and these parameters are entered before the order is entered (i.e. the process of filling out the order) (figures 10 and 11). Therefore, it would have been obvious to one of ordinary skill to combine the teachings of Silverman et al., Handa et al. and Hawkins et al. in order to allow a user to more accurately express her/his trading interests, such as to consummate a transaction before the end of a user's session (e.g. 1 hour, 30 minutes, 1 minute, 30 seconds, etc.) ('501, column 21, lines 13-15; Handa et al., page 4, footnote 9).

Silverman combined with Handa and Hawkins fails to teach the feature of claim 2. Handa page 4 footnote 9 discusses, limit orders that sit on a book. In contrast, claim 2 specifies that the order exposure time is about 30 seconds; however, the order expressed in claim 2 has the attributes of an exposure time for which the order can be displayed for responses. Silverman combined with Handa and Hawkins fails to teach a "thirty second exposure time for which the order can be displayed for responses." Hawkins shows a time limit item on the interface in FIG. 10, and describes it as a "time limit 422." In Hawkins the time limit can be:

Time Limit
This field contains a code indicating the time limit or the date on which the Order is to expire; or both. One of the code words may be selected:
CLO--At the closing.
DAY--Good for the day.
GTC--Good until canceled.
GTE--Good until executed.
GTM--Good for the month.
GTD--Good through a date.
GTX--Good until crossed.
IOC--Immediate or cancel.
OPN--At the open.

None of the codes in Hawkins suggests a 30 second period. Hawkins does not suggest that the order is exposed for responses and that the exposure time is about 30 seconds.

Claim 20

Claim 20, which depends from claim 19, recites that entering pre-defined relative indications can occur before or after an order is entered.

Appellant does not understand how the argument of the examiner relates to claim 20, since claim 20 deals with entry of pre-defined relative indications. Nonetheless, claim 20 serves to further distinguish, since the reference fail to suggest the pre-defined relative indication.

Conclusion

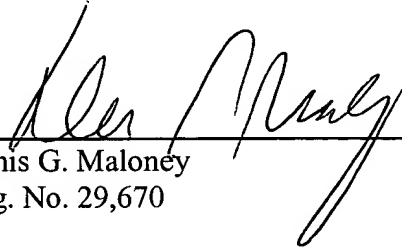
Appellant submits, therefore, that claims 1-13, 55-58, 64, and 71-78 were improperly rejected under 35 U.S.C. 101, claims 3, 24-32 were rejected under 35 U.S.C. 112, first paragraph, and claims 2, 3, 20, 21, 24-32, 38 and 77 were improperly rejected under 35 U.S.C. 112, second paragraph. Appellant also contends that claims 1-40, 55-58, and 64-78 are allowable over Silverman et al., taken with Handa et al., and Hawkins et al. Therefore, the examiner erred in rejecting Appellant's claims and should be reversed.

Respectfully submitted,

Date: _____

10/20/05

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Appendix of Claims

1. A method of auctioning products, said method executed over a distributed networked computer system, said method comprising:

entering an order for a product by specifying in the order at least conditions of a quantity of the product and an exposure time for which the order can be displayed for responses;

entering responses to the order, at least some of the responses specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price for the product, and quantity for the product; and

matching the order with a first one of the responses that meets all of the conditions specified by the order during the exposure time specified by the order, with matching of the first one of the responses with the order terminating the auction.

2. The method of claim 1 wherein the exposure time specified by the order is less than or equal to about 30 seconds.

3. The method of claim 1 wherein the price of the response changes with changes in the generally accepted indicator during the life of the order having an impact on the final price of the order.

4. The method of claim 1 wherein the products are financial instruments.

5. The method of claim 1 wherein the products are stocks and matching retrieves an oldest response and determines whether the oldest response includes a price that satisfies a price condition specified by the order.

6. The method of claim 1 further comprising:
expiring the order if the exposure time specified by the order has elapsed and no matching response was received.

7. The method of claim 1 further comprising:
entering pre-defined relative indications that correspond to a willingness to buy or sell the product the pre-defined relative indications specify a price relative to a current market price and the pre-defined relative indications being undisclosed to participants in the market until and unless matched with an order.

8. The method of claim 7 wherein the pre-defined relative indications specify a quantity of the product.

9. The method of claim 1 wherein entering orders further comprises:
specifying a price.

10. The method of claim 1 wherein entering responses further comprises:
specifying a product.

11. The method of claim 7 wherein matching further comprises:
retrieving an oldest response or pre-defined relative indication and determining whether the oldest response or pre-defined relative indication satisfies the order.

12. The method of claim 7 wherein retrieving further comprising:
matching pre-defined relative indications to the order with the pre-defined relative indications ranked by price and within a price ranking by time.

13. The method of claim 12 further comprising:
expiring the order if the exposure time specified by the order has elapsed and no matching response or pre-defined relative indication was received.

14. A method of auctioning financial products over a distributed, networked computer system, said method comprising:

entering orders for financial products into the distributed, networked computer system by specifying in the order a price for the financial product, a quantity of the financial product and exposure time which the order can remain active;

entering responses to orders for the product, said responses specifying a price and quantity; and for a first one of said orders,

matching said first order to the responses and contra-side orders, during an interval determined by the exposure time specified by said first order, with a first one of the responses or contra side orders that meets the conditions specified by the order terminating the auction; and

expiring the first one of the orders if no matching responses or contra-side orders are received during the exposure period.

15. The method of claim 14 further comprising:

executing a trade between the first order and one of the contra-side orders or responses that matched the first order.

16. The method of claim 15 wherein executing a trade further comprises:

reporting the first order and the matched one of the contra-side orders or responses to a facility of a self-regulatory organization for market validation.

17. The method of claim 14 wherein the orders can further include additional conditions attached to the order.

18. The method of claim 17 wherein the additional conditions can include a price improvement.

19. The method of claim 14 wherein entering further includes entering pre-defined relative indications.

20. The method of claim 19 wherein entering pre-defined relative indications can occur before or after an order is entered.

21. The method of claim 14 wherein the process determines whether a match price falls outside of a spread specified for the product.

22. The method of claim 14 wherein for trading by a broker dealer, the system allows the broker/dealer to specify specific trading options when the broker dealer is trading with its own customer.

23. The method of claim 14 wherein an expired order is sent for a guarantee execution by a market maker or for execution on a market or an exchange.

24. A computer program product for auctioning products, said computer program product residing on a computer readable medium comprising instructions for causing a computer to:

receive an order that was entered for a product, the order having a specified price, a quantity and an exposure time;

receive at least one response specifying a relative price with price improvement, and a quantity; and

match the order with the at least one response during the exposure time specified by the order at the price of the response, with the relative portion of the price fluctuating according to changes in a national best bid/offer price that is periodically published during the auction.

25. The computer program product of claim 24 wherein the products, which are auctioned are products that have a value that changes with market conditions.

26. The computer program product of claim 24 wherein instructions that cause the computer to match further comprise instructions that causes the computer to:

retrieve an oldest response and determine whether the oldest response includes a price that satisfies a price specified by the order.

27. The computer program product of claim 24 further comprising instructions that cause a computer to:

expire the order if the exposure time specified by the order has elapsed and no response that matched the order was received.

28. The computer program product of claim 24 further comprising instructions that cause the computer to:

receive pre-defined relative indications that correspond to a willingness to buy or sell the product, with the pre-defined relative indications specifying a price relative to a current market price.

29. The computer program product of claim 25 wherein the pre-defined relative indications specify a quantity.

30. The computer program product of claim 24 wherein orders specify a product.

31. The computer program product of claim 24 wherein responses specify a product.

32. The computer program product of claim 24 wherein instructions that cause the computer to match further comprise instructions that causes a computer to:

retrieve an oldest response, contra-side order, or pre-defined relative indication and determine whether the oldest response, contra-side order, or pre-defined relative indication satisfies the order.

33. A system for auctioning financial products over a distributed, networked computer system, said system comprising:

a plurality of workstations for entering orders for financial products into the distributed, networked computer system by specifying in the order a quantity of the financial product and an exposure time for which the order is displayed for responses;

a plurality of workstations for entering responses to orders for the product, said responses specifying a price and quantity;

a server computer coupled to the workstations for entering the orders and the responses, said server computer executing a server process that for a first one of said orders,

determines a match to said first order with the responses and contra-side orders during the exposure time specified by said first order.

34. The system of claim 33 wherein the server process executes a trade between the first order and one of the other orders or responses that matched the first order.

35. The system of claim 34 wherein at least some of the responses specify the price, as a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price for the product.

36. The system of claim 35 wherein the orders can further include conditions attached to the order.

37. The system of claim 36 wherein the conditions can include a price improvement.

38. The system of claim 33 wherein the response workstations can enter pre-defined relative indications that can exist in the system before an auction for the product has started.

39. The system of claim 33 wherein the response workstations can enter pre-defined relative indications after an order was entered.

40. A system for auctioning financial products over a distributed, networked computer system comprises:

a plurality of workstations for entering orders for financial products into the distributed, networked computer system, the orders specify a price for the financial product, a quantity of the financial product and exposure time which the order can remain active;

a plurality of workstations for entering predefined relative indications, the predefined relative indications specifying a quantity and being undisclosed to participants in the market until and unless matched with an order and responses to orders for the product, the predefined relative indications, the responses specifying a price and quantity; and

a server computer coupled to the workstations for entering the orders, predefined relative indications, and the responses, with the server computer executing a server process, said server process comprising software to:

determine a match to a first order with the predefined relative indications, responses and contra-side orders during an interval determined by the exposure time specified by said first order.

Claims 41-54 are canceled.

55. A method of auctioning securities comprises:

entering an order for a security, the order specifying a condition that seeks a specific minimum relative price improvement and an exposure time for which the order can be exposed to responses;

entering a response to the order, the response specifying a price, which can be a relative or fixed price or a contra-side order that has a condition seeking a relative price improvement, and quantity; and

matching the order with a first one of the response or the contra side order that satisfy conditions of the order and in accordance with the exposure time specified by the order.

56. The method of claim 55 wherein the order with the condition is exposed to the market for the exposure time and wherein the exposure does not reveal the condition.

57. The method of claim 55 wherein the order with the condition specified the price improvement relative to the national best bid/offer (NBBO).

58. The method of claim 55 wherein the order can include other conditions including executing all of the order or none of the order.

Claims 59-60 were canceled.

64. A computer program product method of auctioning securities comprises instructions to cause a computer to:

receive an order for a security, the order specifying a condition that seeks a specific minimum relative price improvement and an exposure time;

receive a response to the order, the response specifying a price, which can be a relative or fixed price or a contra-side order that may have a condition seeking a relative price improvement, and quantity; and

match the order with the response or contra-side order in accordance with the exposure time specified by the order.

65. The system of claim 40 wherein the order further specifies a condition that seeks a specific minimum relative price improvement.

66. The system of claim 40 wherein at least some of the responses to the order specify a price, which is a relative price with a specified price improvement.

67. The system of claim 40 wherein instructions to determine the match, matches the order with a first one of the response or the contra side order that satisfy conditions of the order in accordance with the exposure time specified by the order.

68. The system of claim 40 wherein one of the orders has a condition, the one of the orders is exposed to the market for the exposure time but the exposure does not reveal the condition.

69. The system of claim 68 wherein the order with the unrevealed condition specifies price improvement relative to a national best bid/offer.

70. The system of claim 68 wherein at least some of the orders a condition of executing all of the order or none of the order.

71. A method of auctioning products, said method executed over a distributed networked computer system, said method comprising:

entering an order for a product by specifying in the order at least conditions of a quantity of the product and an exposure time for which the order can be displayed for responses;

entering responses to the order, at least one of the responses specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing, current market price for the product, and quantity for the product;

entering pre-defined relative indications that correspond to a willingness to buy or sell the product, the pre-defined relative indications specify a price relative to a current market price and, which are dormant in the system and undisclosed to participants until and unless matched with the order

matching the order with a first one of the responses or predefined relative indications that meets conditions specified by the order, during the exposure time specified by the order.

72. The method of claim 71 wherein a plurality of orders and responses are entered, and wherein matching further comprises:

matching a first one of the orders with the responses during the exposure time interval specified by the order, with the first one of the responses terminating the auction

73. The method of claim 1 wherein a plurality of orders and responses are entered, and matching further comprises:

collecting responses and predefined relative indications during the exposure time specified by the order, and matching the order to an optimal one of the collected responses or predefined relative indications, the optimal one of the responses or predefined relative indications determined in accordance with price and quantity values specified in the optimal one of the responses or predefined relative indications.

74. The method of claim 1 wherein the products are financial instruments.

75. The method of claim 1 wherein the products are stocks.

76. The method of claim 1 further comprising:
expiring the order if the exposure time specified by the order has elapsed and no matching response or predefined relative indication was received.

77. The method of claim 71 wherein the exposure time is less than or equal to about 30 seconds.

78. The method of claim 71 wherein the price of the response changes with changes in the generally accepted indicator during the life of the order having an impact on the final price of the order.

Applicant : Peter B. Madoff et al.
Serial No. : 09/272,542
Filed : March 19, 1999
Page : 48 of 48

Attorney's Docket No.: 10575-002001

Evidence Appendix

None

Related Proceedings Appendix

Peter B. Madoff, et al. Appeal No. 2004-2085, (Board of Patent Appeals and Interferences, Heard: March 8, 2005, Appeal) Application 09/272,542. The opinion was not written for publication and is not binding precedent of the Board. (Copy enclosed).



The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

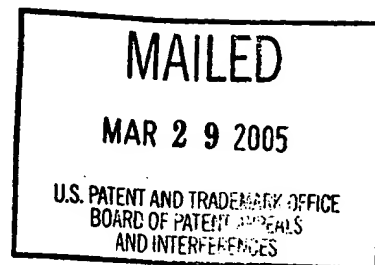
Paper No. 43

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Docketed By Practice Systems
Action Code: <u>Status - Allowance</u>
Base Date: <u>3/29/05</u>
Due Date: <u>9/29/05</u>
Deadline: <u>—</u>
Initial: <u>UJC</u>

Ex parte PETER B. MADOFF,
ALBERTO C. CASANOVA,
and CHRISTOPHER KEITH



Docketed By Billing Secretary
Due Date: <u>9-29-05</u>
Deadline: <u>—</u>
Initials: <u>mjc</u>

Appeal No. 2004-2085
Application 09/272,542¹

HEARD: March 8, 2005

Before HAIRSTON, BARRETT, and LEVY, Administrative Patent Judges.
BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-40, 55-58, and 64-78.

Claims 41-54 and 59-63 have been canceled.

We reverse.

¹ Application for patent filed March 19, 1999, entitled "Auction Market With Price Improvement Mechanism."

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FISH & RICHARDSON, P.C.
BOSTON OFFICE

BACKGROUND

The invention relates to an automated auction system and method for trading products such as equity securities.

Claim 33 is reproduced below.

33. A system for auctioning financial products over a distributed, networked computer system, said system comprising:

a plurality of workstations for entering orders for financial products into the distributed, networked computer system by specifying in the order a quantity of the financial product and an exposure time for which the order is displayed for responses;

a plurality of workstations for entering responses to orders for the product, said responses specifying a price and a quantity;

a server computer coupled to the workstations for entering the orders and the responses, said server computer executing a server process that for a first one of said orders,

determines a match to said first order with the responses and contra-side orders during the exposure time specified by said first order.

THE REFERENCES

The examiner relies on the following references:

Silverman et al. (Silverman)	5,136,501	August 4, 1992
Harrington et al. (Harrington)	6,161,099	December 12, 2000
		(filed May 29, 1998)

THE REJECTIONS

Claims 33, 34, 39, and 64 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Harrington.

Claims 1, 2, 4, 6-11, 14-25, 27-32, 35, 36, 40, 55-58, 65-72, and 74-78 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Harrington.

Claims 3, 5, 12, 13, 26, and 73 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Harrington and Silverman.

We refer to the final rejection (Paper No. 30) and the examiner's answer (Paper No. 36) (pages referred to as "EA__") for a statement of the examiner's rejection, and to the brief (Paper No. 35) (pages referred to as "Br__") and reply brief (Paper No. 37) (pages referred to as "RBr__") for a statement of appellants' arguments thereagainst.

OPINION

Grouping of claims

Appellants group the claims as follows for purposes of this appeal (Br9):

Group	I: claims 33-39
Group	II: claims 1, 4-6, 9, 10, 13, 24-32, and 73-75 ²
Group	III: claim 2
Group	IV: claim 3
Group	V: claims 7, 8, 11, 12, and 76
Group	VI: claims 14-23
Group	VII: claims 40 and 65-70
Group	VIII: claims 55-58
Group	IX: claims 71, 72, 77, and 78
Group	X: claim 64.

² Appellants do not include claim 74 in any of the groupings. The claim most logically fits in this group.

Since claims 5, 12, 13, 26, and 73 have been rejected over the combination of Harrington and Silverman, it is not logical that these claims stand or fall together with claims that are rejected only over Harrington. We separately address these claims within the respective group.

Group I: claims 33-39

Claim 33 is rejected as anticipated by Harrington (FR5-6). The examiner provides a dictionary definition of "order" as a "commission or instruction to buy, sell or supply something," and reads the claimed "order" on the offer to sell in Harrington and the claimed "responses" on the bids to buy (FR2).

Initially, we find that Harrington is not directed to the same invention as that disclosed by appellants. Harrington is concerned with original issue auctions of financial instruments as opposed to existing instruments (e.g., col. 2, lines 49-60). It is evidently the examiner's position that the claims are broad enough to be anticipated by or obvious over Harrington alone or in combination and we have addressed the rejection in that light.

Appellants argue that Harrington does not teach "entering orders for financial products ... by specifying in the order a quantity of the financial product and an exposure time for which the order is displayed for responses." It is argued that "orders," as used in the claims, can be two-sided to be either a "buy" order or a "sell" order (Br15). It is argued that

Harrington describes that the Issuer will "offer" to sell bonds to underwriters who "bid" on the bonds to establish a yield (Br15). It is argued that Harrington does not possess "orders" because when the Issuer starts an auction by offering a bond, the "offer" that starts the auction does not have any contra side "offer" to buy (Br15). "That is, Harrington cannot use one of the offers entered by an Issuer to match a contra-side offer of that Issuer or another Issuer.... In Harrington, an auction of one bond Issue cannot be matched off against that of another bond issue on the contra (opposite) side of the market, since the contra side of the offer does not exist." (Br15.)

The examiner states that appellants have not provided a definition of "order" that would distinguish the limitation of "entering an order" over Harrington (EA3). The examiner relies on the dictionary definition of "order" as a "commission or instruction to buy, sell or supply something," and concludes that since Harrington is dedicated to selling financial products, the auction defining process in Figs. 10 and 15 is an "entering an order" step because it serves as a commission or instruction to sell the financial product (EA3-4). The examiner finds that the quantity, type of financial product, and exposure time are "all parameters used by an auctioneer, issue, auction administrator... etc. when preparing a financial product for sale" (EA4). The examiner responds that appellants' argument that an "order" can

be to "buy" and "sell" reads limitations into the term and refers again to the dictionary definition (EA12). The examiner states that appellants mischaracterize the teachings by framing the buy and sell relationship as between two issuers and arguing that an issuer must also be able to buy bonds (EA12-13), and finds no support for the term "buy" in claim 33 (EA13).

Appellants reply that the term "order" conveys to one skilled in the art that the order could be a buy or sell order (RBr2). "Claim 33 requires an order and a contra-side order namely a buy order and a sell order." (RBr2.) It is argued that claim 33 call for three distinct elements (orders, contra-side orders, and responses) and the examiner does not squarely address these features (RBr3). It is argued that a "response" is entered in response to an auction and while orders and contra-side orders have the common property that each has an exposure time, "the response has a different property, i.e., the response is priced relative to a prevailing current market price and has a price improvement" (RBr3). Appellants argue that by equating "bids" in Harrington to contra-side orders, there is no feature to correspond to the claimed "response" (RBr3-4).

Claim 33 recites "orders," "contra-side orders," and "responses." "Orders" and "contra-side orders" (which are opposite position orders) specify a quantity of the financial product and an exposure time and start an auction that lasts for

the exposure time; in other claims the orders specify a price. As a matter of claim interpretation, while an "order" covers both "buy" and "sell" orders, an "order" is met by either a "buy" order or a "sell" order for purposes of applying prior art; of course, if the "order" is a "sell" order, the "contra-side order" is a "buy" order. "Responses" to the orders specify a price and a quantity; in other claims the responses may specify a relative price with a price improvement. Financial terms have specialized meanings in the art,³ but we agree with the examiner that to the extent there may be a broader general definition, the broadest reasonable interpretation controls. The examiner's dictionary definition of "order" as a "commission or instruction to buy, sell or supply something" is consistent with the meaning in the art, which is an "[i]nstruction to a broker/dealer to buy, sell, deliver, or receive securities or commodities that commits the issuer of the 'order' to the terms specified." See Glossary at "<http://biz.yahoo.com>." A "bid" is "[t]he price a potential buyer is willing to pay for a security." Id. The "ask" is "the lowest price an investor will accept to sell a stock [A]lso called the offer price." Id. An "offering" is the first sale of stocks or bonds to the public. Id. Thus, the "bid" and "offer"

³ At the oral hearing, appellants provided a number of definitions from different sources for the terms "bid," "offer," and "order." These definitions are not part of the record. It would have been more constructive to present these definitions to the examiner.

in Silverman are comparable to a "buy" order and "sell" order, respectively. Harrington discloses an "offering" for bonds, in particular, an original issue offering. Harrington describes an original issuer auction whereby the auction is conducted by an auctioneer hired by the Issuer to solicit and receive bids (col. 6, lines 36-37). We have wrestled with the examiner's reasoning that Harrington discloses an "order" because it is a commission or instruction to sell a financial product, and with the terminology that an "offer" can correspond to a "sell" order. In view of the claim breadth, we do not see error in the examiner's reading of "orders" on the "offerings" of financial products in Harrington (although it is not clear that the two auctions shown in Figs. 10 and 11 specify "a quantity of the financial product," as claimed, this is not argued; note that claim 33 does not require the order to specify a price) and "responses" on the "bids" in Harrington. An "order" can be met by either a "sell" order or a "buy" order. Claim 33 does not require that the financial product to be sold is in existence and the transaction can be completed immediately as opposed to after an auction as taught by Harrington.

However, we agree with appellants that Harrington does not teach "contra-side orders." A "contra-side order" requires a contra (opposite) position, i.e., a "buy" order is contra to a "sell" order and a "sell" order is contra to a "buy" order.

Harrington does not teach a "contra-side order" because it deals with original issuer auctions where there are no financial instruments yet and, hence, no contra position. Contra side positions require that the financial instruments exist that can be subject to offers to buy and sell. For this reason alone claim 33 is not anticipated. While Harrington discloses that the present invention is applicable to other kinds of financial instruments (col. 6, lines 13-16), it does not describe anything that could be considered a "contra-side order." Of course, since Harrington does not disclose a "contra-side order," it does not teach a system that "determines a match to said first order with ... contra-side orders." Appellants' argument that a "response" has the property that it is priced relative to a prevailing current market price and has a price improvement is without support in claim 33; compare claim 71.

Appellants also argue that Harrington does not describe an order having an "exposure time for which the order is displayed for response," as claimed (Br15; RBr2-3). The examiner finds that Harrington teaches an exposure time for which the order can be displayed, referring to column 10, lines 32-41, and column 12, lines 24-30 (EA12-13). Appellants argue that Harrington does not describe an order having an "exposure time," but does not reply to the examiner's finding (RBr3).

Harrington discloses that the auction has a specified start time and end time and that bids must be submitted during this time (col. 10, lines 32-35). However, there is no teaching in Harrington that the exposure time is specified by the Issuer in the offer. It is simply speculation whether the exposure time is specified by the Issuer or the auctioneer or some other entity. It is improper to resort to speculation or unfounded assumptions to supply deficiencies in the factual basis for a rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967).

Therefore, we find that Harrington does not teach "contra-side orders," the orders specifying a "response time," and that the system "determines a match to said first order with ... contra-side orders." The anticipation rejection of claim 33 and its dependent claims 34 and 39 is reversed. Since no other art is applied to dependent claims 35-38, the rejection of these claims for obviousness is also reversed.

Group II: claims 1, 4-6, 9, 10, 13, 24-32, 73, and 75

Claim 1 is representative.

Appellants argue that Harrington does not suggest an order because the offer disclosed by Harrington does not possess the features of an order (Br16).

This argument has been addressed and found to be unpersuasive in the analysis of claim 33. Although it is not clear that the two auctions shown in Figs. 10 and 11 of

Harrington specify "a quantity of the product," this limitation is not argued. It is noted that claim 1 does not require the order to specify a price; compare claim 14. Claim 1 does not recite a "contra-side order," as in claim 33, and we conclude that the fact that a contra-side order does not exist does not prevent an offer to sell from being an order.

Appellants argue that Harrington does not suggest orders specifying exposure times (Br16).

We agree that Harrington does not disclose that the offering specifies the exposure time as discussed in regard to claim 33.

Appellants argue (Br16) that Harrington does not suggest "specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price for the product." It is further argued (Br16) that the "current best bid" in Harrington is simply the best bid in the auction at the instant in time and is not equivalent to a "generally accepted indicator of a prevailing current market price."

The examiner finds that the "best bid" is a "generally accepted indicator of a prevailing current market price," while an incoming and better bid embodies a "price improvement" (EA14).

Appellants reply that the teaching of "better or best bids" does not suggest a generally accepted indicator of a prevailing current market price (RBr5). It is argued that the word

"current" allows for the price of a particular response to change with the market, but, in Harrington's system, the price is not current but is merely the best price (RBr5). "There does not exist a generally accepted indicator of prevailing current market price in Harrington because the purpose of Harrington's system is to try to establish a market for the product offered." (RBr5.)

We agree with appellants that a "best bid" is not equivalent to a "generally accepted indicator of a prevailing current market price." In the original issue auctions described by Harrington, the auction is setting the market price; unlike a stock market or secondary market there is no available market price. However, assuming that a "best bid" is a "prevailing current market price" in the loose sense that it is what the market is willing to pay, it is not considered a "generally accepted indicator" because the bids are continuously changing and has only been accepted by one bidder. In addition, while each incoming bid is a "price improvement" over the preceding bid, that bid is not a "relative price," which is defined as "being relative to a generally accepted indicator of a prevailing current market price," because there is no "generally accepted indicator of a prevailing current market price" and because the bid specifies an absolute price, not a price "relative" to the preceding bid.

Appellants argue that claim 1 covers the situation where products are bought or sold by the order, whereas Harrington has no such analogy (B16).

That the term "order" is broad enough to cover both "buy" orders and "sell" orders, but does not require both "buy" and "sell" orders. A reference that teaches a only "sell" order meets the "order" limitation. Claim 1 does not recite a "contra-side order."

Appellants argue (Br17) that Harrington does not suggest the limitation "matching the order with a first one of the responses that meets all of the conditions specified by the order during the exposure time ... with matching of the first one of the responses with the order terminating the auction." It is argued that Harrington waits until the auction ends and awards winning bids based on the best true interest cost (TIC) and according to the end time of the auction, not the conditions specified in the order (Br17). It is noted that while other types of auctions are mentioned in the background, such as a "Dutch flower auction," Harrington teaches away from using such a mechanism (Br17).

The examiner finds that the "Dutch flower auction" in the background is the type of auction where the first to accept an order wins and that one skilled in the art would have knowledge of the different methods for conducting an auction (EA14-15). The examiner concludes that it would have been obvious for the

auctioneer in Harrington to choose a winner by any of the established auction methods (EA15).

Appellants admit that it was within the skill in the art to implement a "Dutch flower auction," but state that the examiner did not provide a cogent line of reasoning as to how or why the Dutch flower auction mechanism would be used in Harrington's system or is otherwise relevant (RBr5). It is argued that a Dutch flower auction is a type of auction where the auctioneer offers to sell a product in decreasing price increments, the first buyer to accept a bid being the winner, but this would not be useful in Harrington's auction system for the purpose of price yield discovery since it puts the burden on the Issue of the bonds to determine what the market is (RBr5).

It is not clear how the examiner proposes modifying the original issuer auctions of Harrington to use a Dutch flower auction or what the motivation would be. If the examiner proposes using the auction to sell something other than original issue instruments, this has not been stated. However, even if Harrington was a Dutch flower auction, it would not appear to meet the claim limitations. In a Dutch flower auction the offers to sell are made by the auctioneer in decreasing price increments with the first buyer to accept a bid being the winner. Claim 1 recites entering responses with "at least some of the responses specifying a relative price with a price improvement," which does

not fit the Dutch flower auction format. It appears that the examiner has just found a teaching of the first response being the winner and said that the matching limitation would have been obvious. Absent a clear line of reasoning, we conclude that the matching limitation is neither taught nor suggested.

Appellants argue that the examiner misapplies the so-called "printed matter" doctrine to dismiss the features involving responses and matching (Br17).

The examiner responds that each limitation in claim 1 has been addressed and the point about "printed matter" is moot although the examiner stands by his analysis (EA15-16).

The printed matter doctrine states that patentable weight will not be given to the content of the printed matter and this doctrine has no application to claim 1.

Therefore, we conclude that Harrington does not disclose or suggest the obviousness of "entering an order ... specifying in the order ... an exposure time," "specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price for the product," and "matching the order with a first one of the responses that meets all of the conditions specified by the order during the exposure time ... with matching of the first one of the responses with the order terminating the auction" in

claim 1. The obviousness rejection of claims 1, 4, 6, 9, 10, 13, 24, 25, 27-32, 74, and 75 over Harrington is reversed.

With respect to claims 5, 13, 26, and 73, the examiner finds that Harrington does not teach a method of determining a best bid and finds that Silverman teaches an anonymous matching system that matches bids with orders based on quantity, price, and time (oldest response) (EA10-11). The examiner concludes that it would have been obvious to combine the teaching of Harrington and Silverman to increase system efficiency (EA11). The rejection does not explain away the deficiencies of Harrington. Silverman appears to be a much closer (or at least easier to apply) reference to the claims. Silverman discloses "offers" ("sell" orders) and "bids" ("buy" orders or "contra side orders") in the context of an auction market, where bids and offers are automatically matched (col. 1, lines 18-26; example of bidding for ten million Yen and offering fifteen million Yen, col. 13, lines 27-28 and col. 13, line 56, to col. 14, line 15). The orders are compared against the oldest response where the price is the same (e.g., col. 17, lines 7-18). However, the claimed "orders" and "contra-side orders" have specified exposure times, which is not suggested by Silverman. Nor does Silverman teach specifying a relative price with a price improvement. The rejection of claims 5, 13, 26, and 73 over Harrington and Silverman is reversed.

Group III: claim 2

The rejection of claim 2 is reversed because we have reversed the rejection of claim 1 from which it depends.

Group IV: claim 3

The examiner finds that Harrington does not teach a method of determining a best bid and finds that Silverman teaches an anonymous matching system that matches bids with orders based on quantity, price, and time (oldest response) (EA10-11). The examiner concludes that it would have been obvious to combine the teaching of Harrington and Silverman to increase system efficiency (EA11). The rejection does not explain away the deficiencies of Harrington. Accordingly, the rejection of claim 3 over Harrington and Silverman is reversed.

Group V: claims 7, 8, 11, 12, and 76

The rejection of claims 7, 8, 11, and 76 is reversed because we have reversed the rejection of claim 1 from which they directly or indirectly depend. Silverman does not cure the deficiencies of Harrington, so the rejection of claim 12 over the combination is also reversed.

Group VI: claims 14-23

Claim 14 is representative. Appellants may wish to consider whether the recitation of matching the first order to responses and contra-side orders, "with a first one of the responses that

meets the conditions specified by the order terminating the auction," should recite "with a first one of the responses or contra-side orders that meets the conditions specified by the order terminating the auction."

Appellants argue that "Harrington does not suggest orders and does not suggest contra-side orders. Hence, Harrington does not suggest orders specifying an exposure time for which the order can remain active" (Br21).

The examiner finds that the offers in Harrington correspond to the "orders" and interprets that "[a] 'bid' is a contra-side order as it is an order (an instruction to buy) on the opposite side of the an [sic] order to supply or sell something" (EA19).

Appellants rely on their previous arguments (RBr8).

Claim 14 recites "orders," "contra-side orders," and "responses to orders." Claim 14 recites that the "order" specifies a price for the financial product in addition to a quantity of the financial product, and an exposure time. A price was not specified in, for example, claim 33. The offers in Harrington do not specify a price. The auctions in Figs. 10 and 11 specify a value of the bonds to be sold, but the users bids on a coupon and price, or yield, for each principal maturity it wants to purchase in a maturity by maturity bid (col. 9, lines 23-39) or for an aggregate purchase price in an all-or-none bid (col. 9, lines 40-55). Thus, the Issuer's offer specifies a

price, as claimed. Furthermore, we find that there is no teaching that the offers in Harrington specify an "exposure time" as discussed in regard to claim 33.

In addition, as discussed in connection with claim 33, we find nothing in Harrington that corresponds to "contra-side orders," which is an order on the opposite side of the order. A "contra-side order" and a "response" are separately claimed elements and it is not proper to read them both onto the same "bid" in Harrington.

We conclude that Harrington does not disclose or make obvious the limitations of "specifying in the order a price for the financial product ... and an exposure time," a "contra-side order," and the limitations referring to a "contra-side order." In addition, Harrington does not disclose or suggest matching the first order to responses and contra-side orders, "with a first one of the responses that meets the conditions specified by the order terminating the auction," as discussed in the analysis of claim 1. The rejection of claims 14-23 is reversed.

Group VII: claims 40 and 65-70

Claim 40 is representative.

The examiner finds that Harrington discloses sealed-bid and silent and blind auctions where the current highest bid and identity are unknown and concludes that it would have been

obvious to apply features of Harrington to these prior art auction types (EA9).

Appellants argue (Br21) that Harrington does not disclose "pre-defined relative indications specifying a quantity and being undisclosed to participants in the market until and unless matched with an order." It is argued that the predefined relative indications are indications of a willingness to trade that resides in the system and remains dormant and unseen by other participants and which is anonymous as to price, size existence, and identity (Br21). When activated, a predefined relative indication is priced relative to a standard reference quote, e.g., the National Best Bid/Offer (NBBO). Appellants argue that the "silent real-time" auctions, the "sealed-bid" auction where bidders can make one secret bid, and the "silent and blind" auction do not suggest a predefined relative indication having the features that it resides in the system and remains dormant and unseen by other participants, but when activated, becomes a response that is priced relative to a standard reference quote (Br22).

The examiner finds that appellants are trying to read the limitation of "dormant" into the claim (EA20). The examiner finds that the "bids" in Harrington correspond to the predefined relative indications "as each bid is constructed relative to the product to [sic] up for bid and competing bids" (EA20). The

examiner states that a national best bid/offer is only recited in claim 69 and is merely a "best bid" to one in the art (EA20).

Appellants reply that the claim limitations describe a "dormant" situation (RBr8-9).

It is true that claim 40 does not expressly recite the term "dormant" as in claim 71. Nevertheless, the limitation of "predefined relative indications specifying a quantity and being undisclosed to participants in the market until and unless matched with an order" describes a situation where the relative indications are dormant. We fail to see how this limitation is taught or suggested by Harrington. Although the claimed "predefined relative indications" do not recite that the indications are "relative to a generally accepted indicator of a prevailing current market price" as in claim 1, this is a matter of breadth. The examiner finds the "predefined relative indications" to correspond to the bids in Harrington, but this does address the complete limitation of "predefined relative indications specifying a quantity and being undisclosed to participants in the market until and unless matched with an order." Moreover, claim 40 calls "for entering predefined relative indications ... and responses to orders for the product." The examiner's interpretation would apparently read both the "relative indications" and the "responses to orders" on the "bids" in Harrington, which is unacceptable since they are

separate limitations. The examiner concludes that it would have been obvious to apply Harrington to the prior art sealed-bid and silent and blind auction, but this does not address the specifics of the modifications or the claim as a whole; e.g., if Harrington implemented a sealed-bid auction, what would correspond to the "relative indications" and the "responses to orders"?

We conclude that Harrington does not disclose or make obvious the limitations of "predefined relative indications specifying a quantity and being undisclosed to participants in the market until and unless matched with an order" and having both "relative indications" and "responses to orders." In addition, Harrington does not disclose that the "orders specify a price," as discussed in connection with claim 14, or "contra-side orders," as discussed in connection with claim 33, or that the system "determine a match to a first order with the predefined relative indications, responses and contra-side orders during an interval determined by the exposure time specified by the first order." The rejection of claims 40 and 65-70 is reversed.

Group VIII: claims 55-58

Claim 55 is representative.

Appellants argue (Br31) that Harrington does not teach or suggest an "order specifying a condition that seeks a specific minimum relative price improvement." It is argued that "[w]hile Harrington teaches minimum increments and whether to allow all

bids or only better bids, Harrington fails to show a priced offer (that is the purpose of the invention in Harrington to find the price) and does not show a market price and therefore does not teach an order specifying a condition that seeks a specific minimum relative price improvement" (Br22).

The examiner finds that Harrington teaches an "order specifying a condition that seeks a specific minimum relative price improvement" because "the system provides a bidder with a message informing a bidder why her/his/their bid did not meet requirements such as a minimum price" (EA21).

Appellants rely on the arguments in the brief (RBr9).

Initially, we note that while claim 55 recites "a specific minimum relative price improvement," it does not recite relative to what and does not recite relative to a market price; compare this to claim 71. Nevertheless, this is a question of breadth. We agree with appellants that the original issue auctions of Harrington do not show a priced auction. As discussed in connection with claim 14, the auctions in Figs. 10 and 11 specify a value of the bonds to be sold, but the users bids on a coupon and price, or yield, for each principal maturity it wants to purchase in a maturity by maturity bid (col. 9, lines 23-39) or for an aggregate purchase price in an all-or-none bid (col. 9, lines 40-55). Since the Issuer's offer does not specify a price, it would not have suggested an order "that seeks a specific

minimum relative price improvement." As noted in connection with claim 33, Harrington does not expressly disclose that the offer specifies "an exposure time." In addition, if the bids in Harrington correspond to a "response," Harrington does not teach or suggest a "contra-side order" as previously discussed, or the new limitation of a "contra-side order that has a condition seeking a relative price improvement." The rejection of claims 55-58 is reversed.

Group IX: claims 71, 72, 77, and 78

Claim 71 is representative.

Appellants argue (Br22) that Harrington does not disclose or suggest the claim limitation "specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing, current market price." It is further argued (Br22) that Harrington does not disclose or suggest the claim limitation "pre-defined relative indications that correspond to a willingness to buy or sell the product, the pre-defined relative indications specify a price relative to a current market price and, which are dormant in the system and undisclosed to participants until and unless matched with the order."

The examiner finds that the "bids" in Harrington correspond to the predefined relative indications "as each bid is constructed relative to the product to [sic] up for bid and

competing bids" (EA21-22). The examiner finds that a "bid" reflects a willingness to buy and that the "best bid" in Harrington corresponds to the "prevailing current market price" since it is the price of obtaining the product (EA22).

Appellants rely on the previous arguments (RBr9).

As discussed in connection with claim 1, we conclude that a "bid" in Harrington is not equivalent to a "generally accepted indicator of a prevailing current market price." Moreover, the bids are for specific amounts, such as a coupon and price, or yield, for each principal maturity in a maturity by maturity bid (col. 9, lines 23-39) or for an aggregate purchase price in an all-or-none bid (col. 9, lines 40-55); the bids do not specify a "relative price with a price improvement." In addition, the bids in Harrington cannot correspond to both a "response" and a "pre-defined relative indication" because these are separate elements. Furthermore, Harrington does not disclose or suggest "pre-defined relative indications ... which are dormant in the system and undisclosed to participants until and unless matched with the order," as discussed in connection with claim 40. Also, Harrington does disclose "matching the order with a first one of the responses or predefined relative indications that meets conditions specified by the order, during the exposure time specified by the order" because it waits until the end of the auction. The rejection of claims 71, 72, 77, and 78 is reversed.

Group X: claim 64

Appellants argue (Br23) that Harrington does not teach or suggest "the order specifying a condition that seeks a specific minimum relative price improvement and an exposure time" and instructions to "match the order with the response or contra-side order in accordance with the exposure time specified by the order."

The examiner finds that Harrington expressly teaches auction start and end times (EA2), which we interpret to relate to the limitation of "exposure time." The examiner finds (EA22) that a "best bid" is "generally accepted indicator of a prevailing current market price."

"Appellant relies upon the discussion of a prevailing current market price with price improvement as discussed above for Group V." (RBr9.)

We conclude that Harrington does not teach or suggest "the order specifying a condition that seeks a specific minimum relative price improvement and an exposure time," for the reasons discussed in connection with claim 55, and does not teach or suggest a "contra-side order" for the reasons discussed in connection with claim 33. The anticipation rejection of claim 64 is reversed.


Citation of reference

The article A Tale of Two Trading Venues: Electronically Delivered Orders vs. Floor Brokered Orders on the American Stock Exchange by Puneet Handa et al., Proceedings of the 32nd Hawaii International Conference on System Sciences - 1999, evidently published January 1999 (footnote 1), copy attached, is cited of interest because it discusses contra-side market orders, price improvement, anonymous orders (footnote 8), and electronic trading (e.g., footnote 3).

CONCLUSION

The rejections of claims 1-40, 55-58, and 64-78 are reversed.

REVERSED


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